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MITSUBISHI CS-40507 OWNER'S MANUAL

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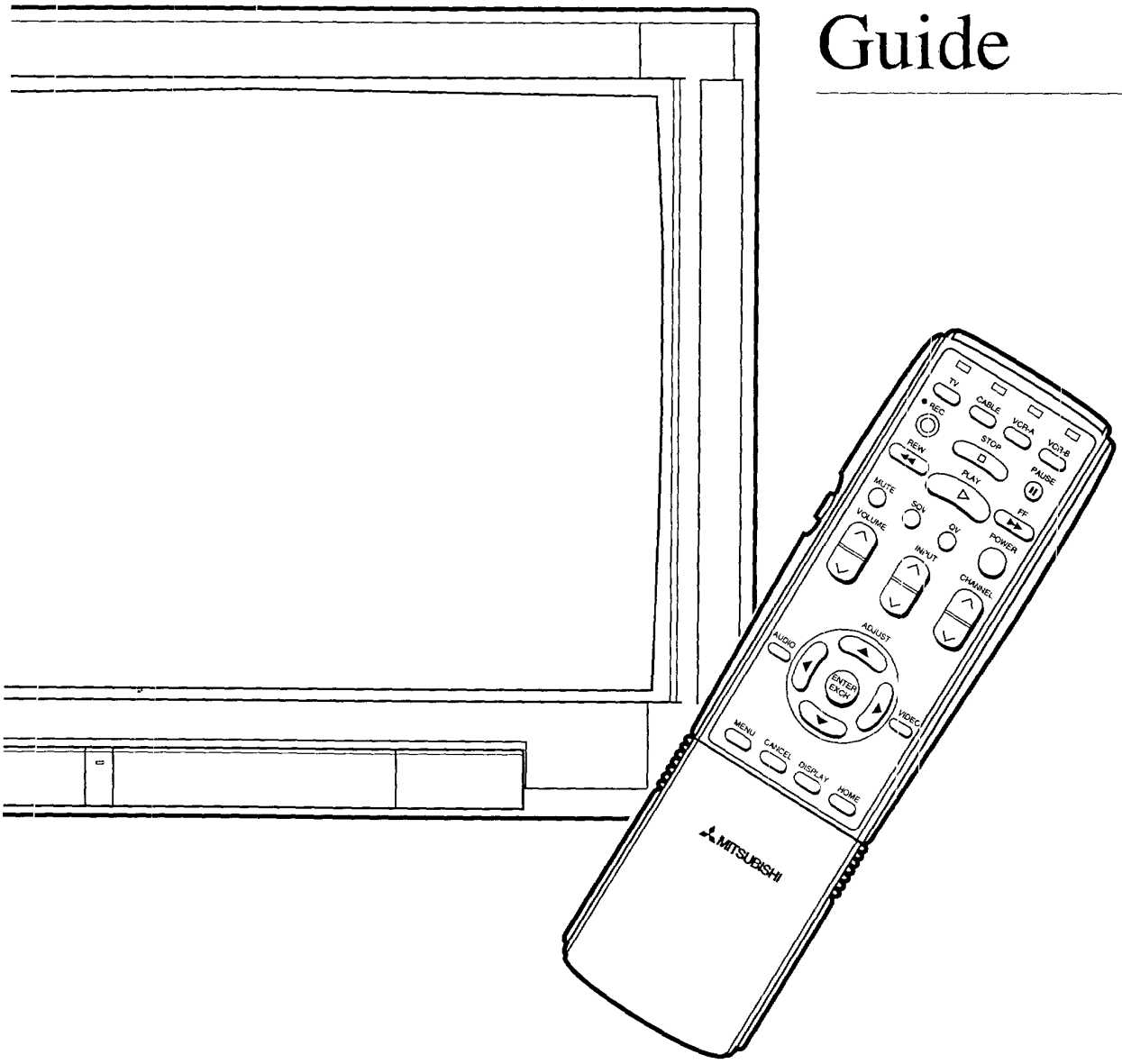
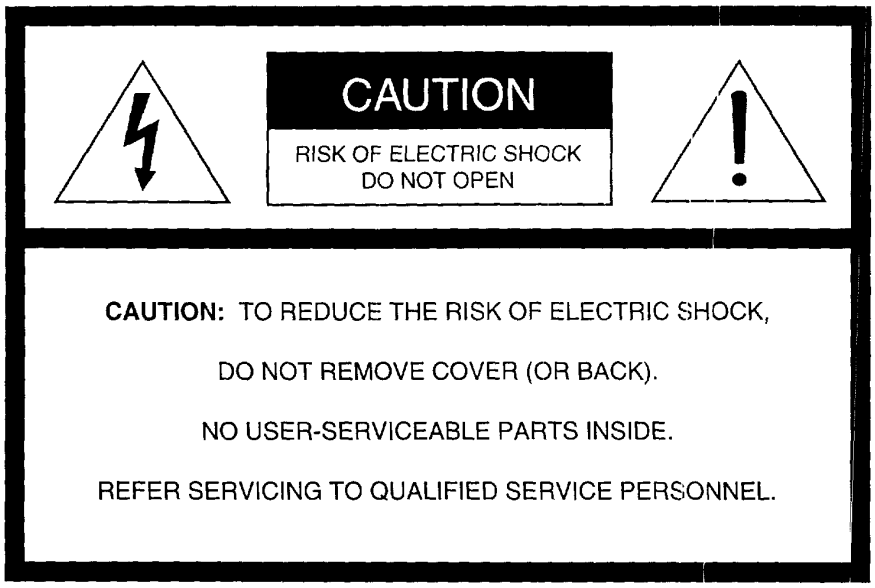
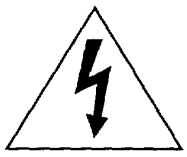
MITSUBISHI **CS-40507**

TV Owner's Guide




CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

▶Warning: Don't leave stationary images, such as stock market reports, video games, station logos, or the TV's displays, on-screen for more than 10 minutes. Still patterns such as these can scar the TV, causing permanent damage to the picture tube.

WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION:

TO PREVENT ELECTRIC SHOCK HAZARD, DO NOT USE THIS UNIT'S (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

NOTE TO CATV SYSTEM INSTALLER:

THIS REMINDER IS PROVIDED TO CALL THE CATV SYSTEM INSTALLER'S ATTENTION TO ARTICLE 820-40 OF THE NEC THAT PROVIDES GUIDELINES FOR PROPER GROUNDING AND, IN PARTICULAR, SPECIFIES THAT THE CABLE GROUND SHALL BE CONNECTED TO THE GROUNDING SYSTEM OF THE BUILDING, AS CLOSE TO THE POINT OF CABLE ENTRY AS PRACTICAL.

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IMPORTANT SAFEGUARDS

PLEASE READ ALL THESE INSTRUCTIONS REGARDING YOUR TELEVISION SET AND RETAIN FOR FUTURE REFERENCE. FOLLOW ALL WARNINGS AND INSTRUCTIONS MARKED ON THE TV RECEIVER.

1. Read Instructions
   All the safety and operating instructions should be read before the appliance is operated.

2. Retain Instructions
   The safety and operating instructions should be retained for future reference.

3. Heed Warnings
   All warnings on the appliance and in the operating instructions should be adhered to.

4. Follow Instructions
   All operating and use instructions should be followed.

▶ **Warning:**

5. Cleaning
   Unplug this TV receiver from the wall outlet before cleaning. Do not use liquid or aerosol cleaners to clean your TV. Use a damp cloth for cleaning. Cleaners may permanently damage your screen.

6. Attachment and Equipment
   Never add any attachments and/or equipment without approval of the manufacturer as such additions may result in the risk of fire, electric shock or other personal injury.

7. Water and Moisture
   Do not use this TV receiver where contact with or immersion in water is a possibility. Do not use near: bath tubs, wash bowls, kitchen sinks, laundry tubs, or swimming pools, etc.

8. Accessories
   Do not place this TV receiver on an unstable cart, stand, tripod, bracket, or table. The TV receiver may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the TV receiver. Any mounting of the appliance should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

   An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

9. Ventilation
   Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the TV receiver and to protect it from overheating. Do not block these openings or allow them to be blocked by placing the TV receiver on a bed, sofa, rug, or other similar surface. Nor should it be placed over a radiator or heat register. If the TV receiver is to be placed in a rack or bookcase, ensure that there is adequate ventilation and that the manufacturer's instructions have been adhered to.

10. Power Sources
    This TV receiver should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your appliance dealer or local power company.

11. Grounding or Polarization
    This TV receiver is equipped with a polarized alternating current line plug having one blade wider than the other. This plug will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

12. Power-Cord Protection
    Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

13. Lightning
    For added protection for this TV receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the TV receiver due to lightning and power-line surges.

14. Power Lines
An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

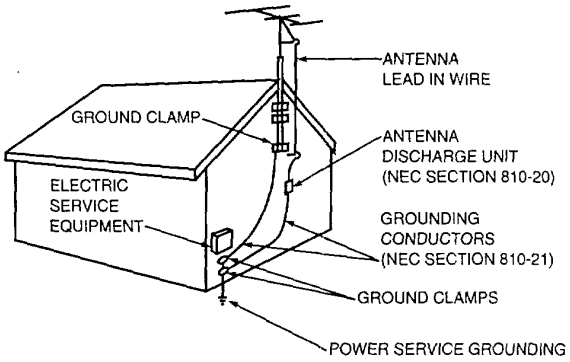
15. Overloading
Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

16. Object and Liquid Entry
Never push objects of any kind into this TV receiver through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the TV receiver.

17. Outdoor Antenna Grounding
If an outside antenna or cable system is connected to the TV receiver, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges.

Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

EXAMPLE OF ANTENNA GROUNDING



NEC — NATIONAL ELECTRICAL CODE

18. Servicing
Do not attempt to service this TV receiver yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

19. Damage Requiring Service
Unplug this TV receiver from the wall outlet and refer servicing to qualified service personnel under the following conditions:
(a) When the power-supply cord or plug is damaged.
(b) If liquid has been spilled, or objects have fallen into the TV receiver.
(c) If the TV receiver has been exposed to rain or water.
(d) If the TV receiver does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the TV receiver to its normal operation.
(e) If the TV receiver has been dropped or the cabinet has been damaged.
(f) When the TV receiver exhibits a distinct change in performance — this indicates a need for service.

20. Replacement Parts
When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

21. Safety Check
Upon completion of any service or repairs to this TV receiver, ask the service technician to perform safety checks to determine that the TV receiver is in safe operating condition.

▶ **Warning:**
Do not leave stationary images, such as stock market reports, video games, station logos, or the TV's displays, on-screen for more than 10 minutes. Still patterns such as these can scar the TV, causing permanent damage to the picture tube.

Welcome to Mitsubishi

Congratulations on your purchase of this Mitsubishi TV. Your TV is designed for superb viewing pleasure as well as continued reliability.

To familiarize you with your TV and owner's guide, we suggest that you read through the preface, which provides the following important information:

- **Summary of Special Features**
- **Unpacking Your TV**
- **What's in Each Chapter**
- **Some Conventions Used in This Guide**

Mitsubishi has strived to create your TV so that it will bring you years of viewing enjoyment. Similarly, your owner's guide is designed with a "user friendly" philosophy that will help you take advantage of all of your equipment's features.

Once again, thank you for selecting our product and welcome to Mitsubishi!

♦ Summary of Special Features

Your top rated Mitsubishi TV delivers:

- **181-Channel Capacity** --- programs up to 181 channels, ensuring your continued viewing pleasure as cable services continue to expand.
- **Four-Speaker Sound System** --- a special speaker system that produces clear stereo sound.
- **Expanded Sound Capability** --- allows you to connect the TV to an external audio system for enhanced listening pleasure.

In addition to the standard features found on most advanced TVs, Mitsubishi is proud to offer the following distinctive features:

- **Remote Control with TV/VCR/CABLE Function** --- uses a single remote control transmitter to operate the television, certain Mitsubishi VCRs, and also some VCRs and cable boxes of other manufacturers.
- **On-Screen Displays** --- appear whenever you adjust your TV, showing you the status of your TV's various functions.
- **On-Screen Menu** --- simplifies the television's features with easy-to-follow instructions.
- **Closed Caption Decoder** --- decodes hidden text information included with TV programs and displays the text on-screen.
- **Extended Data Services** --- (also known as "XDS,") allows broadcasters to supply you with channel information, program information, and the time of day. You can display this information on-screen.
- **Picture-in-Picture Mode** --- allows you to view two different live pictures at the same time.
- **Active A/V Network** --- allows you to perform many of the commonly used features of your system at the press of just one button.

Each of these features will be explained in more detail in Chapter 3, "Operating Your TV," and Chapter 4, "Using the Special Features."

♦ Unpacking Your TV

What you will find

As you unpack your new TV, please check to be sure that along with the TV, the following items are included:

- an owner's guide containing a warranty,
- a registration card,
- a remote control transmitter,
- a set of four AA size batteries for the remote control, and
- an A/V network cable.

A few suggestions

Before you hook up your new TV, please take a few minutes to:

1. Complete the registration card. The registration card asks for the TV's serial number, which you will find on the back of the unit.
2. Keep the box and packing materials for future use.
3. File your sales receipt.
4. Place the TV on a stable surface with sufficient lighting to do the hook-up.

♦ What's in Each Chapter

Here's what you will find in this owner's guide:

Chapter 1, "Getting to Know Your TV," introduces you to the location and functions of the buttons and controls of your TV.

Chapter 2, "Connecting Your TV," explains how to connect a VCR, antenna, decoder and other equipment to your TV.

Chapter 3, "Operating Your TV," provides the step-by-step instructions you need in order to use your TV.

Chapter 4, "Using the Special Features," explains how to use the special features of the TV.

Chapter 5, "Troubleshooting," summarizes the problems you may have along with the suggestions for remedying these problems.

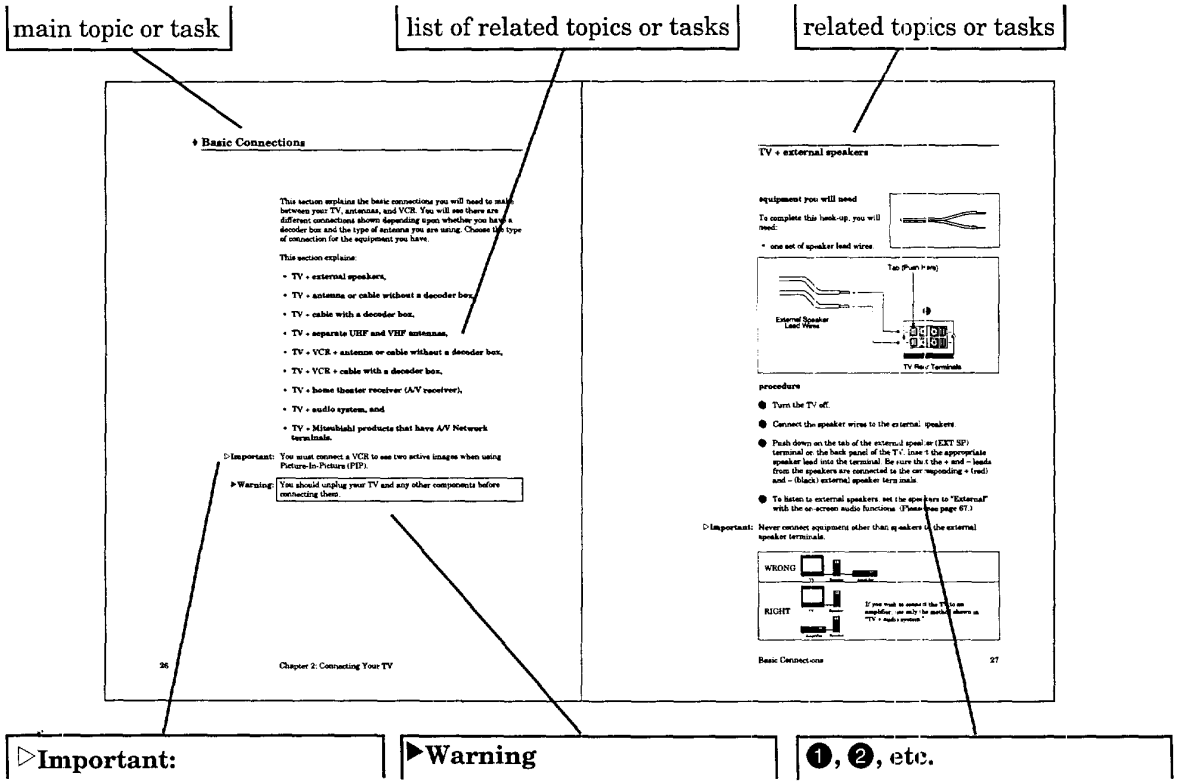
The appendix explains a procedure for bypassing the parental lock.

You will also find a detailed index at the back of the book.

♦ Some Conventions Used in this Guide

Mitsubishi has gone to great effort to provide users with an easy-to-follow, useful owner's guide. You will find that different types of information are treated in different ways.

Users should read information labeled **Important** and information that is boxed and labeled **Warning**. The owner's guide uses these terms sparingly, and you should carefully read all information highlighted in this manner.



▷Important:

This cue indicates information critical to the operation of your new TV.

▶Warning

This cue alerts you to information describing dangerous situations that could ruin your equipment or cause electrical shock.

❶, ❷, etc.

The step-by-step instructions on how to accomplish a particular task are signaled by white numbers on a black background.

CHAPTER ONE

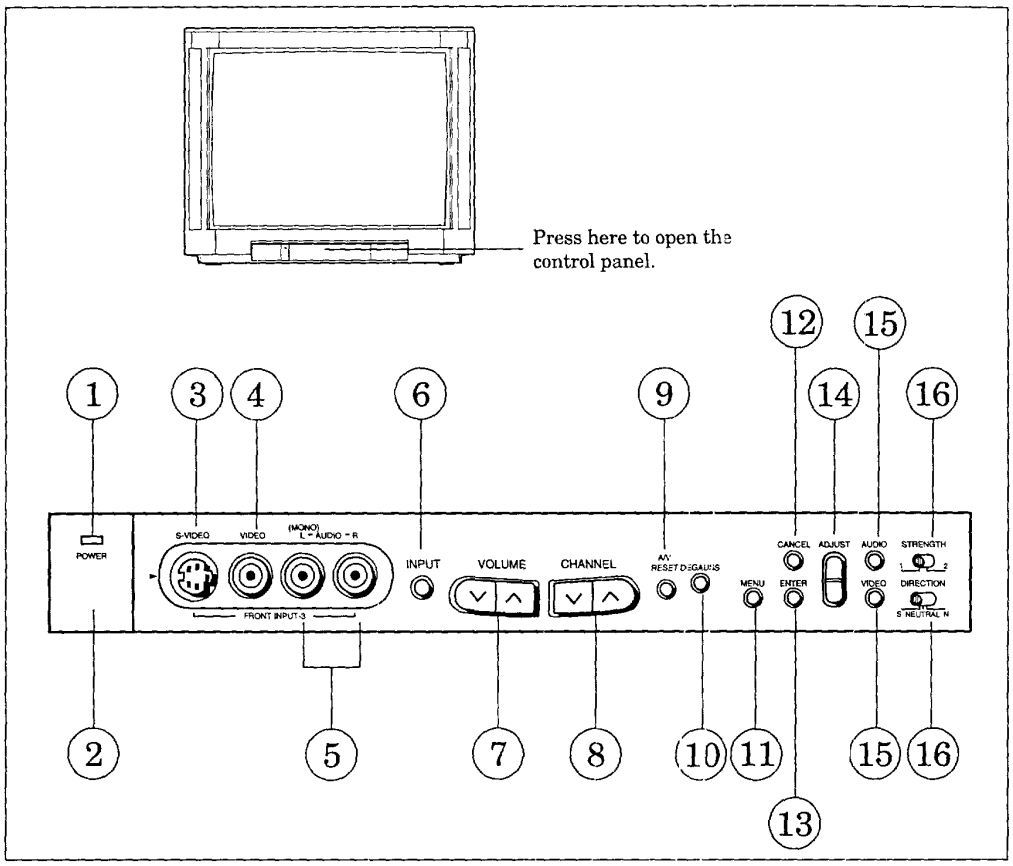
Getting to Know Your TV

Now that you have unpacked your TV, read through the safety information, and glanced at the overview explaining how this owner's guide is organized, it's time to become familiar with the buttons and controls you will be using when you operate the TV. This chapter will introduce the range of options available when using the buttons on the remote control or on the TV's control panel. It also offers some general guidelines for using the remote control.

Most functions can be controlled by using either the control panel or the remote control, but certain specialized functions require the use of one or the other. This chapter, which will familiarize you with the full range of button functions, contains the following sections:

- **Overview of the Control Panel**
- **Overview of the Remote Control**

♦ Overview of the Control Panel



① **power/program timer indicator**
This indicator lights up in green when you turn the TV on; it lights up in red when the timer is set and the TV's power is off; it lights in orange if the timer is set and the TV's power is on.

② **power button (POWER)**
Use to turn the TV on or off. When you turn the TV on, the power indicator will light in green.

③ **S-VIDEO input terminal**
Use to connect the S-video output of a VCR, laserdisc player, or camcorder to the TV. If you connect an S-video cable to this terminal, the adjacent video input cannot be used.

④ **video input terminal**
Use to connect the video output from a standard VCR or another component to the TV.

⑤ **audio input terminals**
Use to connect the audio output from a VCR or other equipment.

⑥ **input button (INPUT)**
Use to select the input source you wish to watch:
- Antenna A,
- Antenna B, or
- Input 1, 2, or 3.

⑦ **volume controls (VOLUME)**
Press the ▲ button to turn up the volume and the ▼ button to turn down the volume.

⑧ **channel controls (CHANNEL)**
Use the ▲ button to switch to a channel with a higher number and the ▼ button to switch to a channel with a lower number.

⑨ **A/V reset button (A/V RESET)**
Press to reset all audio and video functions to their normal level or setting except for volume, the "Listen to:" function (Stereo/SAP/Mono), speaker (internal/external), monitor out (variable/fixed), and closed captioning.

⑩ **degauss button (DEGAUSS)**
Use this button to correct color impurity.

⑪ **menu button (MENU)**
Use this button to display the on-screen menu system, which contains additional instructions for special functions.

⑫ **cancel button (CANCEL)**
This button is used to cancel a channel number, to clear a channel programmed into super quick view memory, and to clear the settings of some on-screen menus.

⑬ **enter button (ENTER)**
Use this button after selecting a channel number or after selecting an item from the on-screen menu system.

Overview of the Control Panel (cont.)

⑭ **adjust button (ADJUST)**
After selecting an audio or video function, use this button to adjust the function. This button can be used to:

- turn the function on or off (e.g., video noise reduction),
- increase or decrease the function (e.g., color),
- shift from one end of a scale to the other (e.g., balance), or
- select a position (e.g., stereo).

This button is also used to select items from the on-screen menu.

⑮ **audio and video controls (AUDIO, VIDEO)**
Use these buttons to select audio and video functions that you want to adjust. To select an audio or video function, repeatedly press the AUDIO button or VIDEO button. After you have selected a function, use the ADJUST button to adjust it.

- **audio function button (AUDIO)** --- Use to select one of the following audio functions:
  - stereo/SAP/mono,
  - bass,
  - treble,
  - balance,
  - audio expansion on/off,
  - level sound on/off,
  - speaker internal/external, or
  - monitor out variable/fixed.

- **video function button (VIDEO)** --- Use to select one of the following video functions:
  - tint,
  - color,
  - contrast,
  - brightness,
  - sharpness,
  - video noise reduction on/off,
  - color temperature high/middle/low,
  - color bias average/accurate/skin tone, or
  - closed captioning.

⑯ **color purity adjustment switches**
Set these switches according to the placement and position of your TV. (See page 45.)

Getting ready to use the remote control

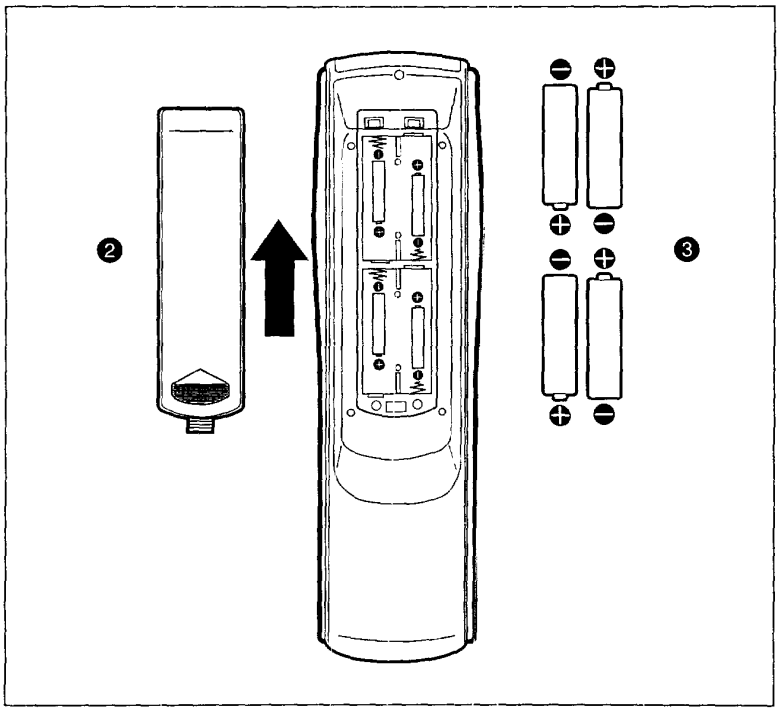
installing the batteries

❶ Take the box containing four AA size batteries from the packing bag.

❷ Remove the back cover of the remote control by pushing the tab in the direction of the arrow and lifting off the cover.

❸ Load the batteries as indicated in the illustration, making sure that they are positioned correctly (+ to +, and – to –).

❹ Replace the back cover of the remote control.



For best results, use Duracell AA (MN1500) batteries.

some do's and don'ts

To ensure that your remote control will continue working properly, follow these guidelines:

- Don't press two or more buttons at the same time, unless you are specifically instructed to do so in this owner's guide.
- Don't allow the remote control to get wet or become heated.
- Avoid dropping the remote control on a hard surface.
- When cleaning the remote control, don't use any harsh chemicals. Use only a soft, slightly moistened cloth.

general instructions

When using the remote control to operate the TV, VCR or cable box, follow these procedures:

1. Be within 20 feet of the desired equipment.
2. Point the tip of the remote control toward the equipment.
3. Press the appropriate button or sequence of buttons.

guidelines for using batteries

- Don't use a new battery with an old one.
- Don't heat, take apart, or throw batteries into a fire.

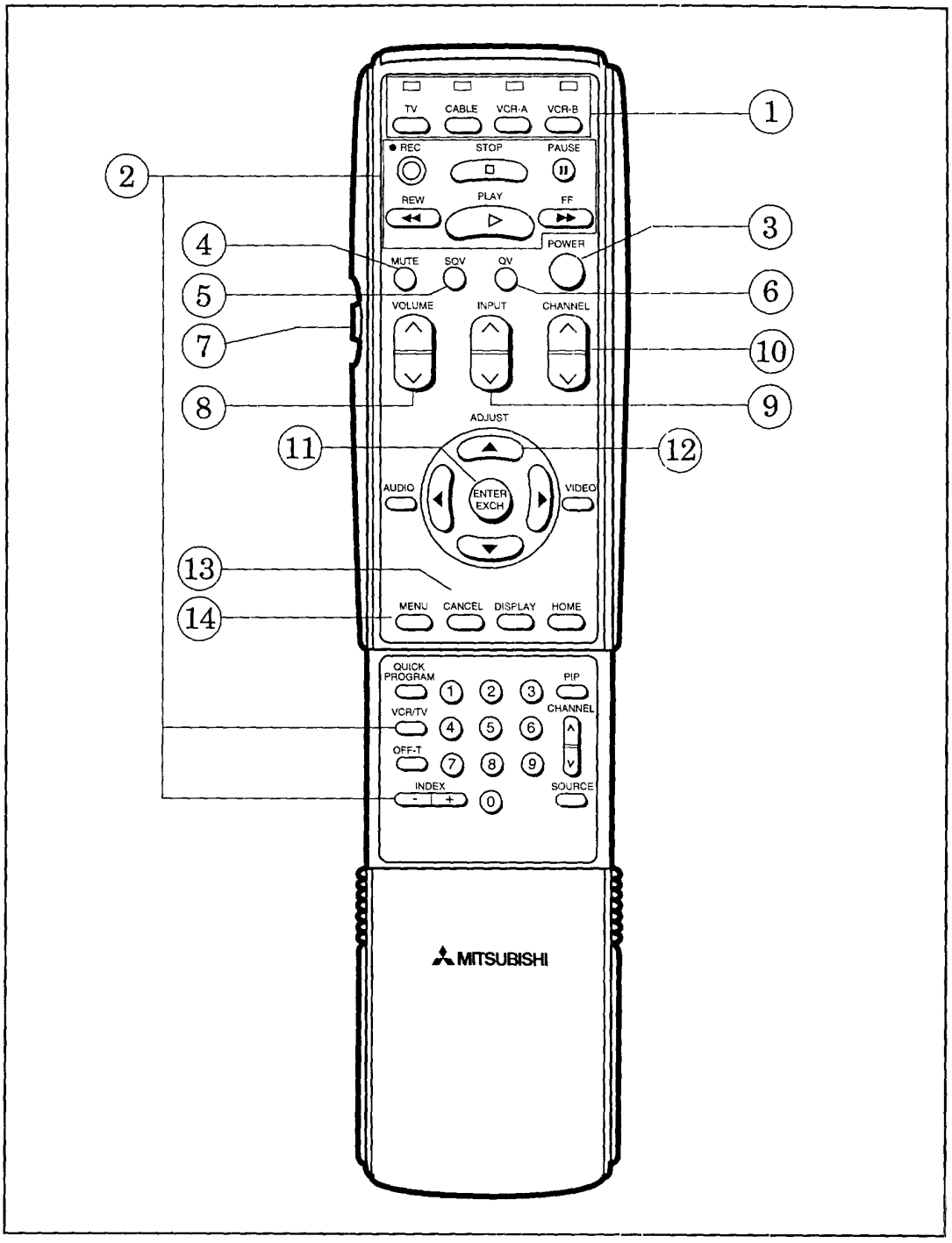
Remote control buttons and functions

This section provides you with an overview of the remote control's buttons and the features that they control.

This section does not provide detailed explanations on the use of these buttons. To determine which buttons are used with a particular feature, refer to the instructions for that feature.

The instructions for individual features are found in Chapter 3, "Operating Your TV," and Chapter 4, "Using the Special Features."

Remote control buttons and functions (cont.)



① select buttons
Your remote control has four layers: the TV layer, the VCR-A layer, the VCR-B layer, and the CABLE layer. You can set up each of these layers to operate a different piece of equipment. Use the four buttons across the top of the remote to select the layer you want to set up or use. When you press a remote control button, the lights above the select buttons will indicate the layer you are using.

② VCR buttons
Use these buttons to control most Mitsubishi VCRs. They can also be set up to control other brands of VCRs. The PLAY button is also used with the Active A/V Network Feature (see page 93).

③ power button (POWER)
Use to turn the TV on or off. When you turn the TV on, the power indicator will light in green.

④ mute control (MUTE)
Use to turn the sound off completely or to restore it to its original volume.

⑤ super quick view button (SQV)
Press to view channels you have programmed into super quick view memory.

⑥ quick view button (QV)
Press this button to instantly switch to the channel that you designated as the "quick view" channel.

⑦ light button
Use to light up the remote control (for 3 seconds).

⑧ volume control (VOLUME)
Press the top part of the button to turn up the volume; press the bottom part of the button to turn down the volume.

⑨ input button (INPUT)
Use to select the input source you wish to watch:
- Antenna A,
- Antenna B, or
- Input 1, 2, or 3.

⑩ channel control (CHANNEL)
Press the top part of the button to change to a channel with a higher number; press the bottom part to change to a channel with a lower number.

⑪ enter button (ENTER / EXCH)
Use this button after selecting a channel number or after selecting an item from the on-screen menu system. You can also use this button when operating the picture-in-picture mode.

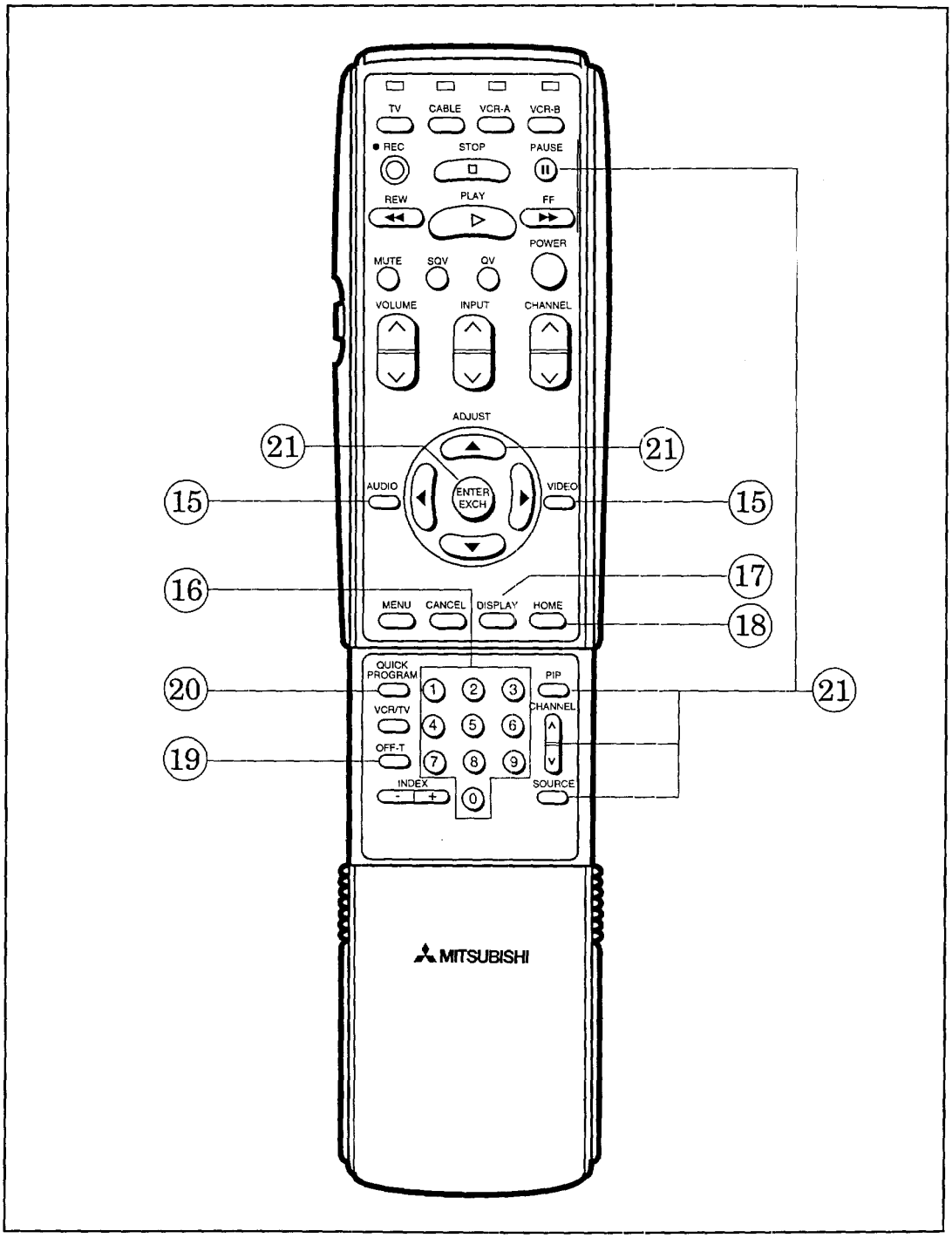
⑫ ADJUST buttons (▲, ▼, ◀, ▶)
After selecting an audio or video function, use these buttons to adjust the function. These buttons can be used to:
- turn the function on or off (e.g., video noise reduction),
- increase or decrease the function (e.g., color),
- shift from one end of a scale to the other (e.g., balance), or
- select a position (e.g., stereo).

You will also use these with the picture-in-picture mode and to select items in the menu system.

⑬ cancel button (CANCEL)
This button is used to cancel a channel number, to clear a channel programmed into super quick view memory, and to clear the settings of some on-screen menus.

⑭ menu button (MENU)
Use this button to display the on-screen menu system, which contains additional instructions for special functions.

Remote control buttons and functions (cont.)



⑮ **audio and video controls**
Use these buttons to select the audio and video functions you want to adjust. Repeatedly press the AUDIO button or VIDEO button to select one of the functions listed below.

- **audio function button (AUDIO)**
  - stereo/SAP/mono
  - bass
  - treble
  - balance
  - audio expansion on/off
  - level sound on/off
  - speaker internal/external
  - monitor out variable/fixed

- **video function button (VIDEO)**
  - tint
  - color
  - contrast
  - brightness
  - sharpness
  - video noise reduction on/off
  - color temperature high/middle/low
  - color bias average/accurate/skin tone
  - closed captioning

⑯ **number buttons (0-9)**
Use to select a channel number and to enter a parental lock code.

⑰ **display button (DISPLAY)**
Use to view an on-screen summary of the current TV settings for TV or cable functions, and the display related to Extended Data Services (XDS).

⑱ **home button (HOME)**
Press to return to regular TV viewing from the on-screen menus, to turn off the on-screen displays, and to cancel the closed captioning.

⑲ **off-timer button (OFF-T)**
Use to program the TV to turn off automatically at a later time.

⑳ **quick program button (QUICK PROGRAM)**
Use this button to easily program your Mitsubishi VCR. When you press this button, your TV will switch to Input-1, your VCR will turn on, and the VCR's "Program to record" menu will appear. When you are finished programming your VCR, press this button again; your VCR will turn off, and your TV will return to its previous position.

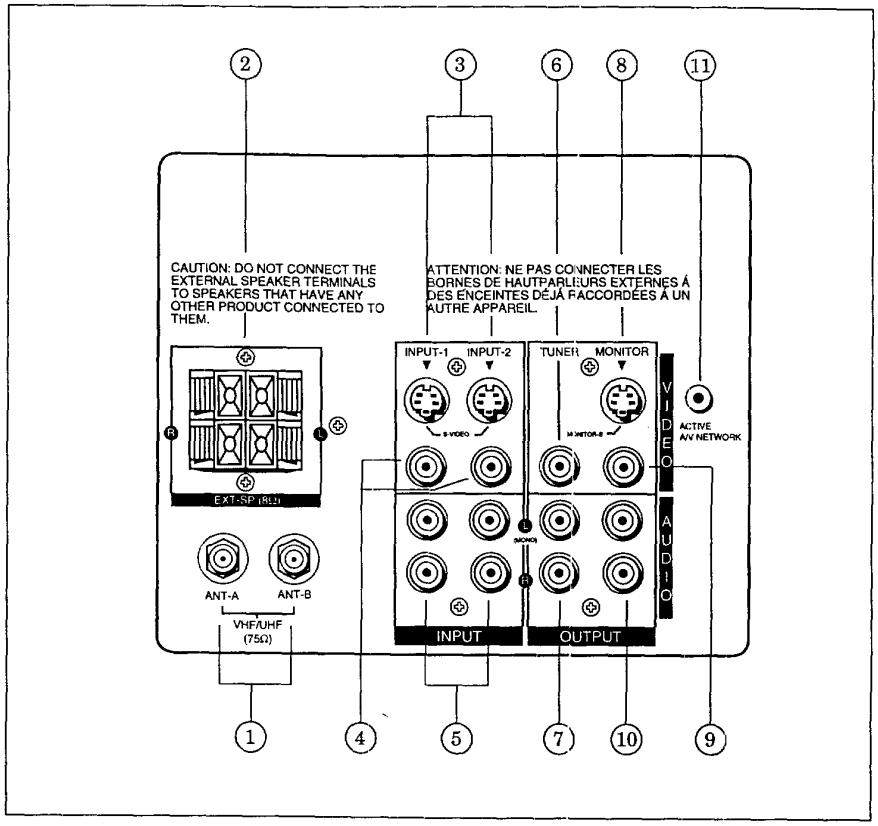
If you press this button while the TV is locked, or while using the television's menus, then the VCR will turn on, but the TV will not switch inputs.

▷ **Important:**
You must have connected a Mitsubishi VCR to your TV with an A/V Network cable to use this feature.

㉑ **picture-in-picture controls**
Use to control the special picture-in-picture (PIP) function. (See pages 86 – 92.)

- **PIP button (PIP)** -- Press to turn on the reduced PIP image, to change its size, or to cancel it. The button is also used with the Active A/V Network Feature (see page 93).
- **channel button (CHANNEL)** -- Press to change the channel of the reduced PIP image.
- **source button (SOURCE)** -- Press repeatedly to switch the source of the reduced PIP image between the TV and the external inputs.
- **pause button (PAUSE)** -- Press to freeze the reduced PIP image, to return to a "live" image, and to use the Snap-shot and Replay functions.
- **enter button (ENTER / EXCH)** -- Press to exchange the sources of the PIP image and the main image.
- **adjust buttons (▲, ▼, ◀, ▶)** -- Press to move the PIP image on-screen.

♦ Overview of the Back Panel



① **antenna terminals (ANT-A, ANT-B)**
Use to connect VHF/UHF antennas or your cable system to your TV.

② **external speaker terminals**
Use to connect external speakers. Only use speakers with a nominal impedance of 8 ohms.

▶Warning:

Never connect equipment other than speakers to the external speaker terminals. Don't connect speakers that are already hooked up to an amplifier.

③ **S-VIDEO input terminals**
Use to connect an S-video cable from a VCR, laserdisc player, or camcorder.

▷Important: If you connect an S-video cable to INPUT-1 or INPUT-2, the corresponding video input will be turned off.

CHAPTER TWO

Connecting Your TV

This chapter offers step-by-step instructions for completing the most common hook-ups. It contains the following sections:

- **Overview of the Back Panel**
- **Basic Connections**

④ **video input terminals**
Use this yellow terminal to receive the video signal from a standard VCR or another component.

⑤ **audio input terminals**
Use these red and white terminals to receive the audio signal from a VCR or other equipment.

⑥ **video tuner output terminal**
Use this yellow terminal to transmit the TV tuner's video signal to a Home Theater receiver.

⑦ **audio tuner output terminals**
Use to these red and white terminals to transmit the TV tuner's audio signal to a Home Theater receiver.

⑧ **S-video monitor output terminal**
Use to transmit an S-video signal from the TV to a VCR, Video Copy Processor, etc.

⑨ **video monitor output terminal**
Use this yellow terminal to transmit the standard video from the TV to a VCR, Video Copy Processor, etc.

⑩ **audio monitor output terminals**
Use these red and white terminals to transmit the TV's audio signal to an audio amplifier.

⑪ **Active A/V Network terminal**
Use to connect Mitsubishi products that have A/V network terminals.

♦ Basic Connections

This section explains the basic connections you will need to make between your TV, antennas, and VCR. You will see there are different connections shown depending upon whether you have a decoder box and the type of antenna you are using. Choose the type of connection for the equipment you have.

This section explains:

- **TV + external speakers,**
- **TV + antenna or cable without a decoder box,**
- **TV + cable with a decoder box,**
- **TV + separate UHF and VHF antennas,**
- **TV + VCR + antenna or cable without a decoder box,**
- **TV + VCR + cable with a decoder box,**
- **TV + home theater receiver (A/V receiver),**
- **TV + audio system, and**
- **TV + Mitsubishi products that have A/V Network terminals.**

▷**Important:** You must connect a VCR to see two active images when using Picture-In-Picture (PIP).

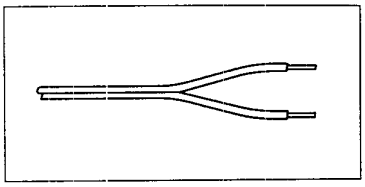
▶**Warning:** You should unplug your TV and any other components before connecting them.

Depending on your system, you may have to make connections described in more than one of the sections above.

To complete the appropriate connections for your system, you may need to purchase additional accessories, such as cables, adaptors, or splitters. These accessories are sold by electronics stores, your Mitsubishi dealer, and many places that sell A/V equipment.

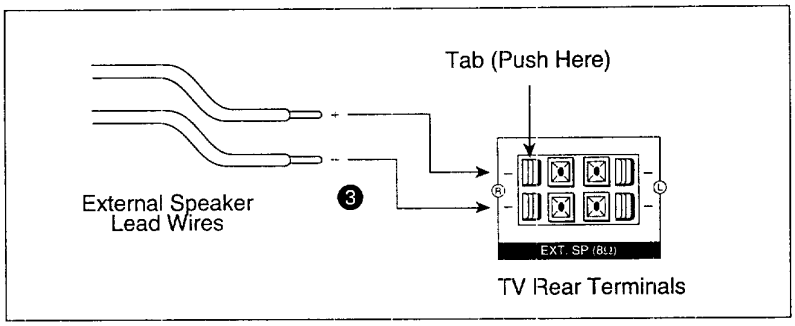
TV + external speakers

equipment you will need



To complete this hook-up, you will need:

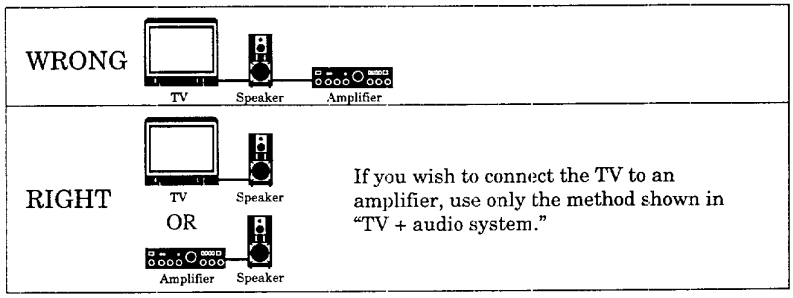
- one set of speaker lead wires.



procedure

1. Make sure the TV is unplugged.
2. Connect the speaker wires to the external speakers.
3. Push down on the tab of the external speaker (EXT SP) terminal on the back panel of the TV. Insert the appropriate speaker lead into the terminal. Be sure that the + and – leads from the speakers are connected to the matching + (red) and – (black) external speaker terminals.
4. To listen to external speakers, set the speakers to "External" with the on-screen audio functions. (Please see page 65.)

▶Warning: Never connect equipment other than speakers to the external speaker terminals.



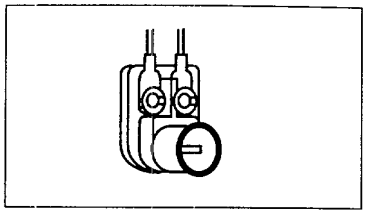
You should make this connection in addition to one of the other connections in this chapter, not instead of other connections.

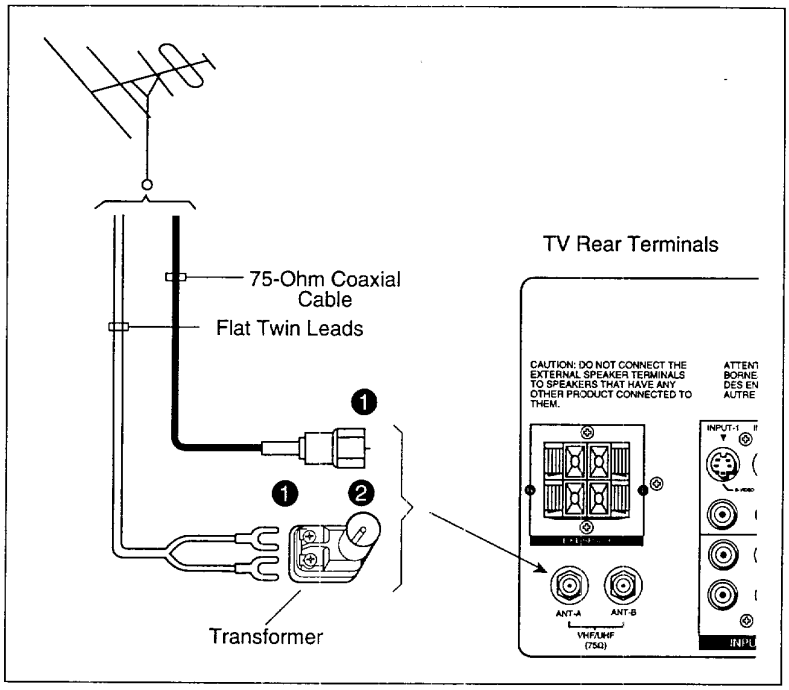
TV + antenna or cable without a decoder box

equipment you will need

If you have a standard 75-ohm coaxial cable, you will not need additional equipment. If your antenna has two leads (called flat twin leads), you will need:

- one 75-300 ohm transformer.





connecting a cable

1. Push or screw the end of the cable onto the ANT-A terminal on the television.

connecting an antenna with flat twin leads

1. Use a screwdriver to connect the leads to the transformer.
2. Push or screw the transformer onto the ANT-A terminal on the television.

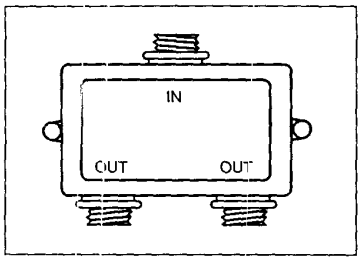
TV + cable with a decoder box

equipment you will need

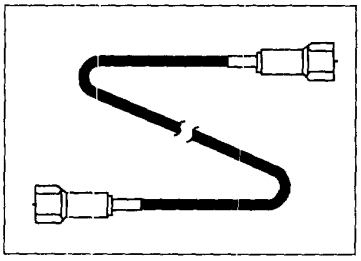
Use this hook-up if you need a decoder box to descramble some of your cable signals. When you complete this hook-up, you should set up your remote control to operate your cable box (see page 47).

To complete the hook-up, you will need:

- one two-way splitter, and



- three 75 ohm coaxial cables.



procedure
(Please see illustration on the following page.)

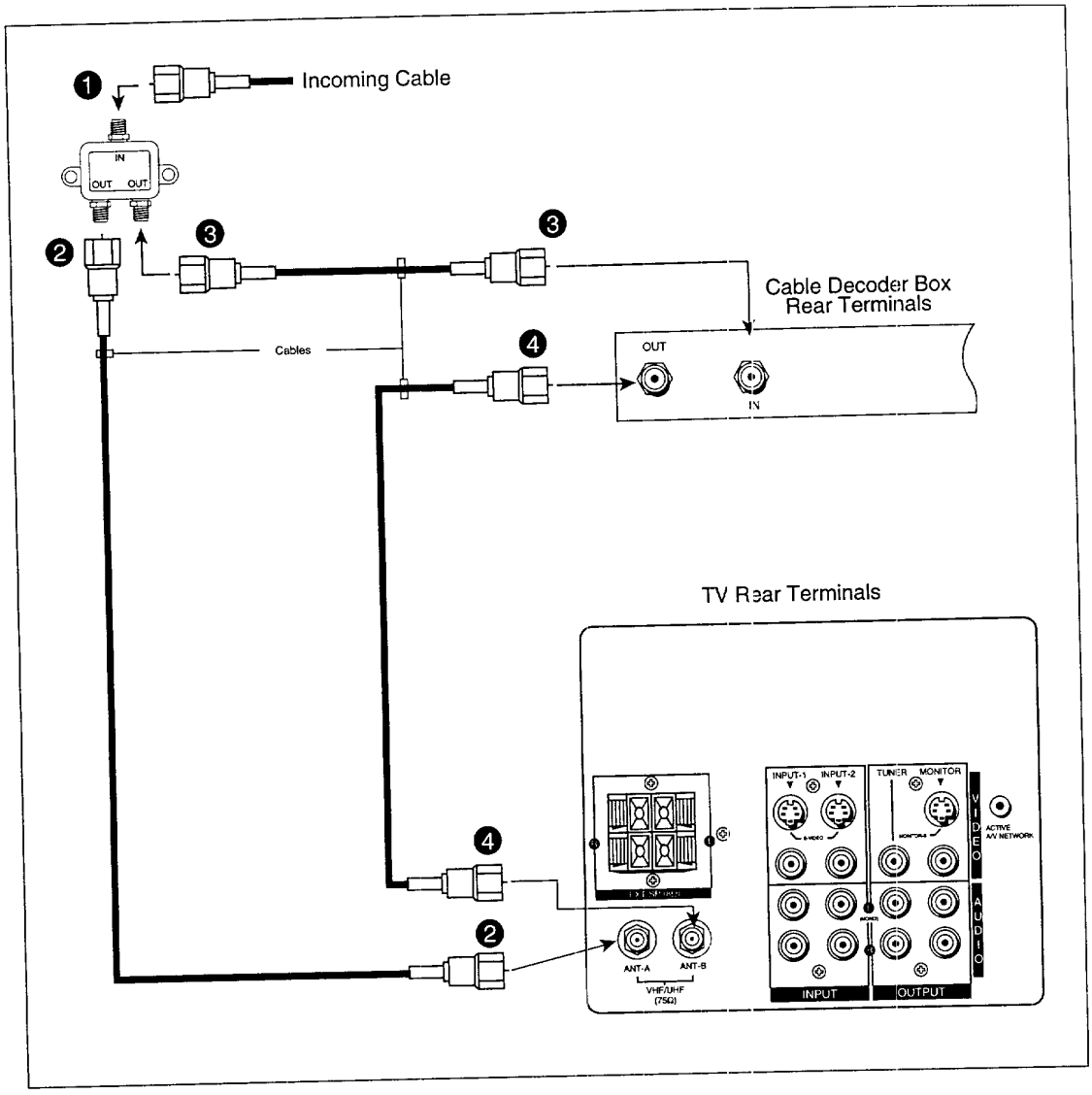
1. Connect your cable system's incoming cable to the IN terminal on the two-way splitter.

2. Connect a coaxial cable to one of the OUT terminals on the splitter; connect the other end of this cable to the ANT-A terminal on the back of the TV.

3. Connect the second coaxial cable to the second OUT terminal on the splitter; connect the other end of this cable to the IN terminal on the decoder box.

4. Connect the third coaxial cable to the OUT terminal on the back of the decoder box; connect the other end of this cable to the ANT-B terminal on the back of the TV.

TV + cable with a decoder box (cont.)

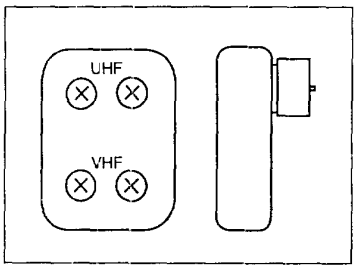


TV + separate UHF and VHF antennas

equipment you will need

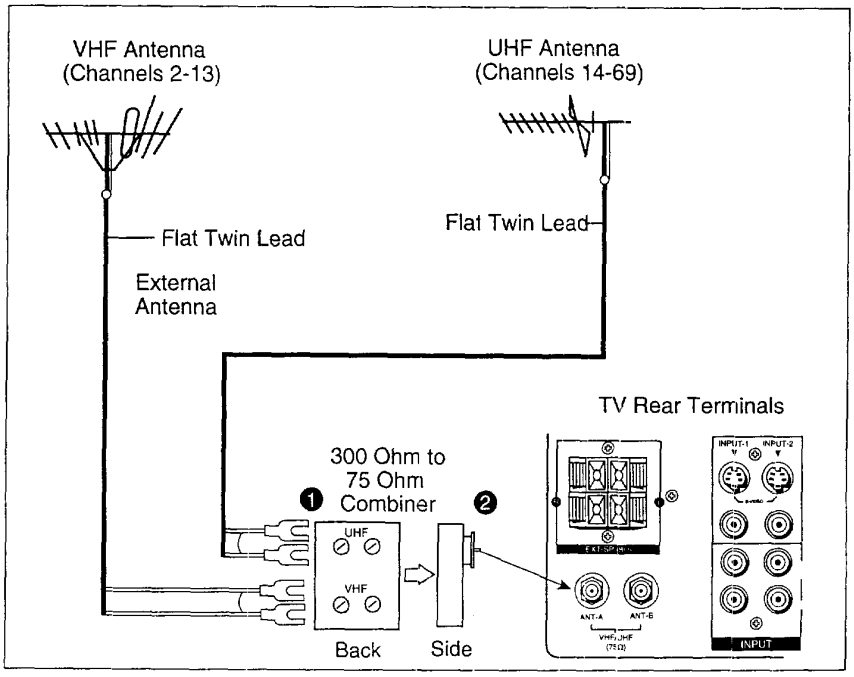
If UHF and VHF signals are brought into your home with two separate antennas, you will need to combine the antennas to connect them to the TV. To do this you will need a UHF/VHF combiner. (There are different combiners for different kinds of leads. Check with your local electronics store for the kind of combiner you need.)

Pictured to the right is a standard combiner.



To connect separate UHF and VHF antennas to your television:

1. Connect the UHF and VHF antenna leads to the appropriate terminals on the UHF/VHF combiner.
2. Press the combiner onto the ANT-A terminal on the television.

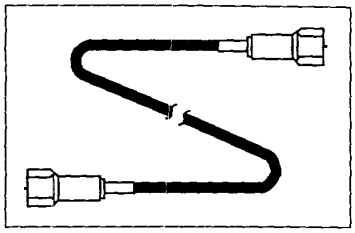


TV + VCR + antenna or cable without a decoder box

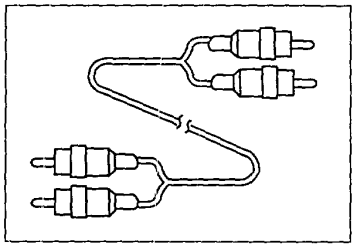
equipment you will need

You may want to connect a VCR along with your antenna or cable system. To complete this hook-up, you may need the following equipment.

- one 75 ohm coaxial cable,

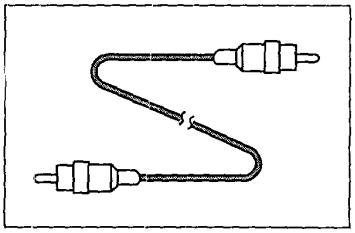


- one set of RCA pin-type audio cables,

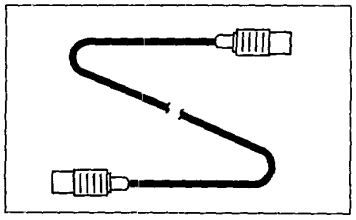


- one RCA pin type video cable, (if connecting a standard VCR),

  OR



- one S-video cable (if connecting a VCR with an S-video output).



procedure
(Please see illustration on the following page.)

❶ Connect the incoming cable or antenna to the ANTENNA IN terminal on the VCR.

❷ Connect one end of a coaxial cable to the ANTENNA OUT terminal on the VCR.

❸ Connect the other end of the coaxial cable to the ANT-A terminal on the TV.

❹ Do ONE (not both) of the following:

- Connect a video cable to the VIDEO OUT terminal on the back of the VCR. Connect the other end of this cable to the VIDEO INPUT terminal on the back of the television.

- Connect an S-video cable to the S-VIDEO OUT terminal on the VCR. Connect the other end of this cable to the S-VIDEO INPUT terminal on the back of the television.

❺ Connect audio cables to the AUDIO OUT terminals on the back of the VCR. Use the red cable to connect the right (R) channel and the white cable to connect the left (L) channel.

❻ Connect the other ends of these cables to the AUDIO INPUT terminals on the back of the television.

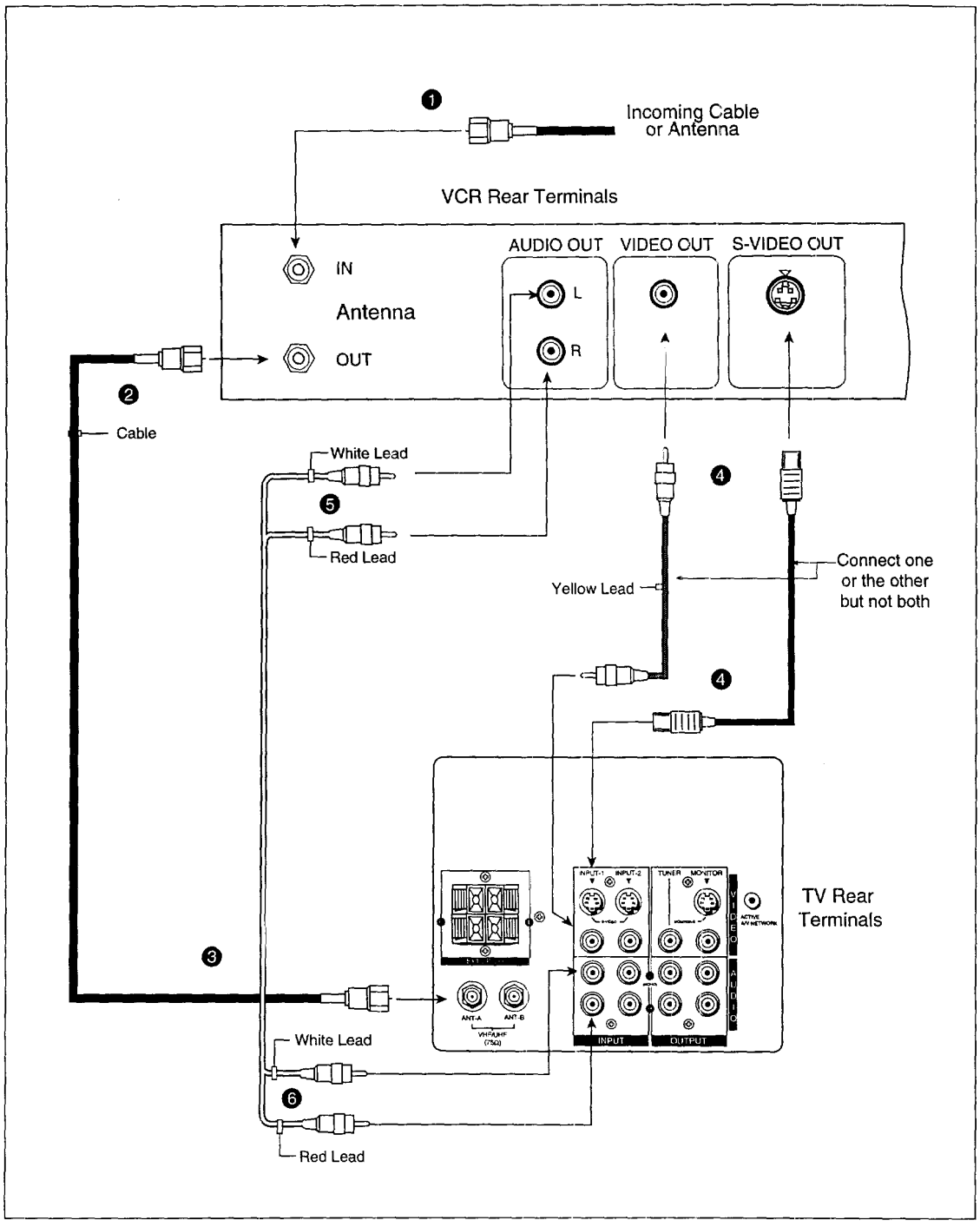
▷**Important:** If your VCR is monaural (non-stereo), only connect a single audio cable. Connect this cable to the VCR, then connect the other end of the cable to the L (LEFT) audio input on the back of the television.

▷**Important:** If your VCR has a video channel switch with an "OFF" setting or an "AV" setting, set the switch to that setting.

❼ Begin playing a tape of the VCR.

❽ Use the INPUT button on the control panel or on the remote control to select the input (INPUT-1 or INPUT-2) to which you connected the VCR.

TV + VCR + antenna or cable without a decoder box (cont.)



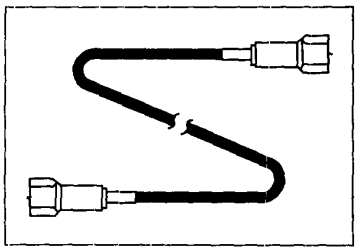
TV + VCR + cable with a decoder box

equipment you will need

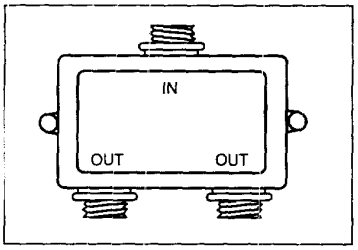
This hook-up will allow you to record scrambled channels while watching a non-scrambled channel. When you complete this hook-up, you should set up your remote control to operate your cable box (see page 47).

To complete the hook-up, you will need:

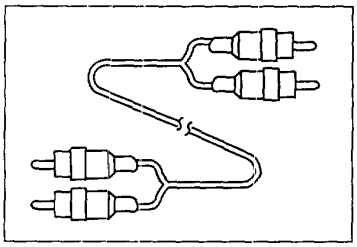
- four 75 ohm coaxial cables,



- one two-way splitter,

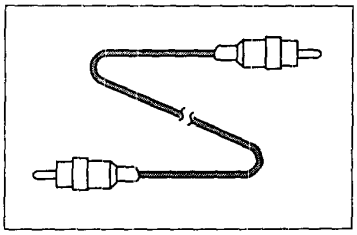


- one set of RCA pin-type audio cables,

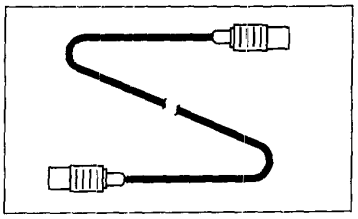


- one RCA pin-type video cable, (if connecting a standard VCR),

OR



- one S-video cable (if your VCR has an S-video output).



TV + VCR + cable with a decoder box (cont.)

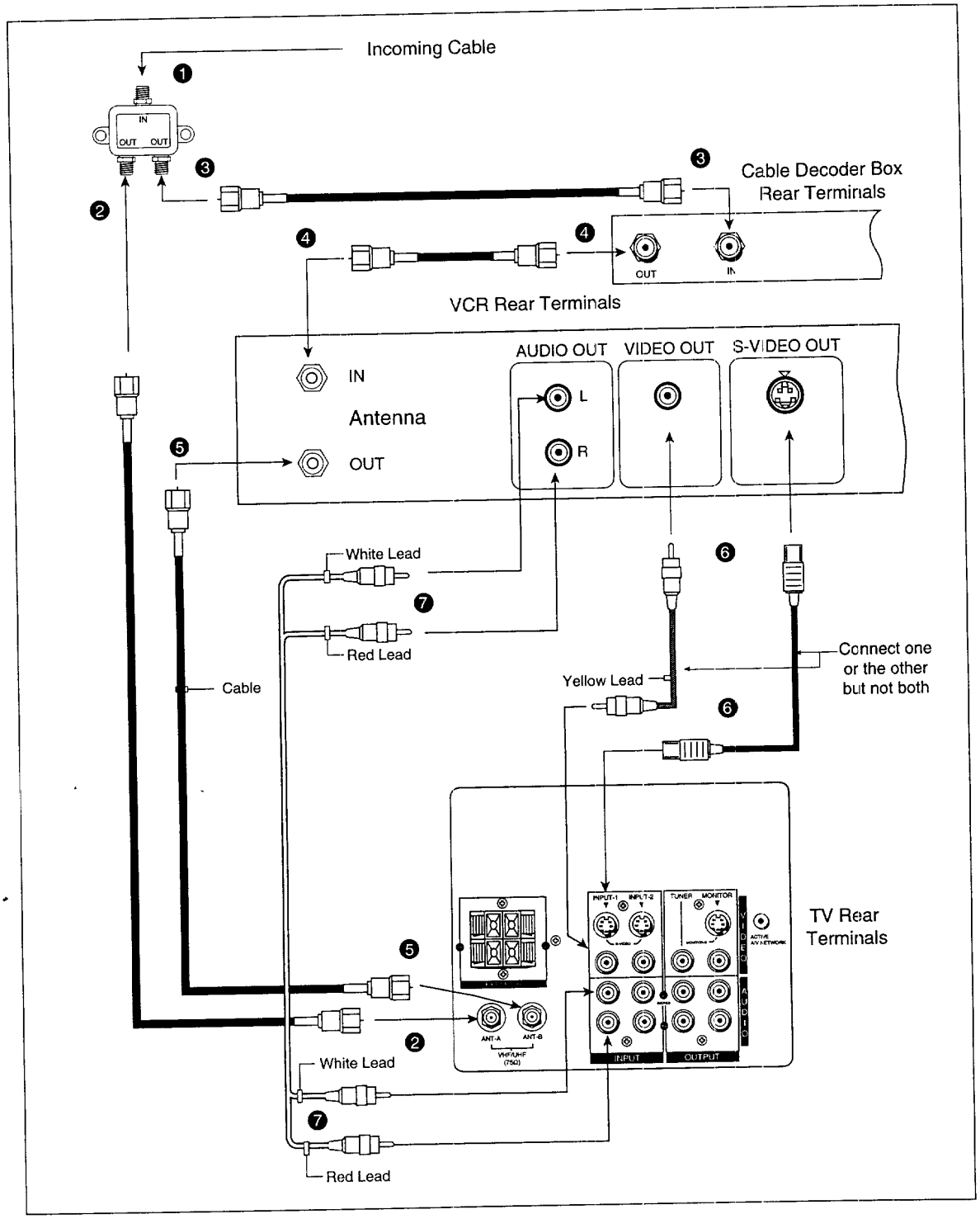
procedure

1. Connect the incoming cable of your cable system to the IN terminal on the two-way splitter.
2. Connect a coaxial cable to one of the OUT terminals on the splitter; connect the other end of this cable to the ANT-A terminal on the back of the TV.
3. Connect a second coaxial cable to the other OUT terminal on the splitter; connect the other end of this cable to the IN terminal on the decoder box.
4. Connect the third coaxial cable to the OUT terminal on the back of the decoder box; connect the other end of this cable to the ANTENNA-IN terminal on the back of the VCR.
5. Connect the fourth coaxial cable to the ANTENNA-OUT terminal on the back of the VCR. Connect the other end of this cable to the ANT-B terminal on the back of the TV.
6. Do ONE (not both) of the following:
   - Connect a video cable to the VIDEO OUT terminal on the back of the VCR. Connect the other end of this cable to the VIDEO INPUT terminal on the back of the television.
   - Connect an S-video cable to the S-VIDEO OUT terminal on the VCR. Connect the other end of this cable to the S-VIDEO INPUT terminal on the back of the television.
7. Connect a set of audio cables to the AUDIO OUT terminals on the back of the VCR. Use the red cable to connect the right (R) channel and the white cable to connect the left (L) channel.
8. Connect the other ends of these cables to the AUDIO INPUT terminals on the back of the television.

▷**Important:** If your VCR is monaural (non-stereo), only connect a single audio cable. Connect this cable to the VCR, then connect the other end of the cable to the L (LEFT) audio input on the back of the television.

▷**Important:** If your VCR has a video channel switch with an "OFF" setting or an "AV" setting, set the switch to that setting.

9. Start playing a tape on your VCR.
10. Use the INPUT button on the control panel or on the remote control to select the input (INPUT-1 or INPUT-2) to which you connected the VCR.

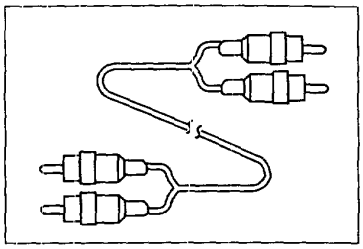

Incoming Cable
IN
OUT OUT
Cable Decoder Box
Rear Terminals
OUT
IN
VCR Rear Terminals
AUDIO OUT
VIDEO OUT
S-VIDEO OUT
IN
Antenna
OUT
L
R
White Lead
Red Lead
Cable
Yellow Lead
Connect one
or the other
but not both
TV Rear
Terminals
ANT-A
ANT-B
VHF/UHF
(75Ω)
INPUT-1
INPUT-2
TUNER
MONITOR
INPUT
OUTPUT
White Lead
Red Lead

TV + home theater receiver (A/V receiver)

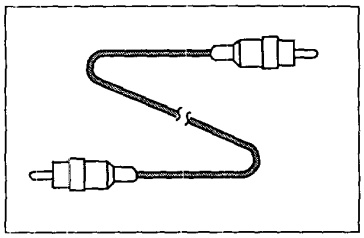
A home theater (A/V) receiver has video inputs and outputs and is used to control an A/V system. See your receiver's owner's guide for information about connecting VCRs and other equipment. If your receiver does not have video inputs and outputs, turn to page 40.

equipment you will need

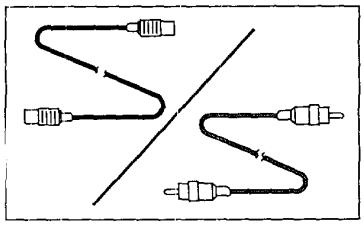
- one set of RCA pin-type audio cables,



- one RCA pin-type video cables (to complete step ❶ below), and



- either one S-video cable or one RCA pin-type video cable to complete step ❷.



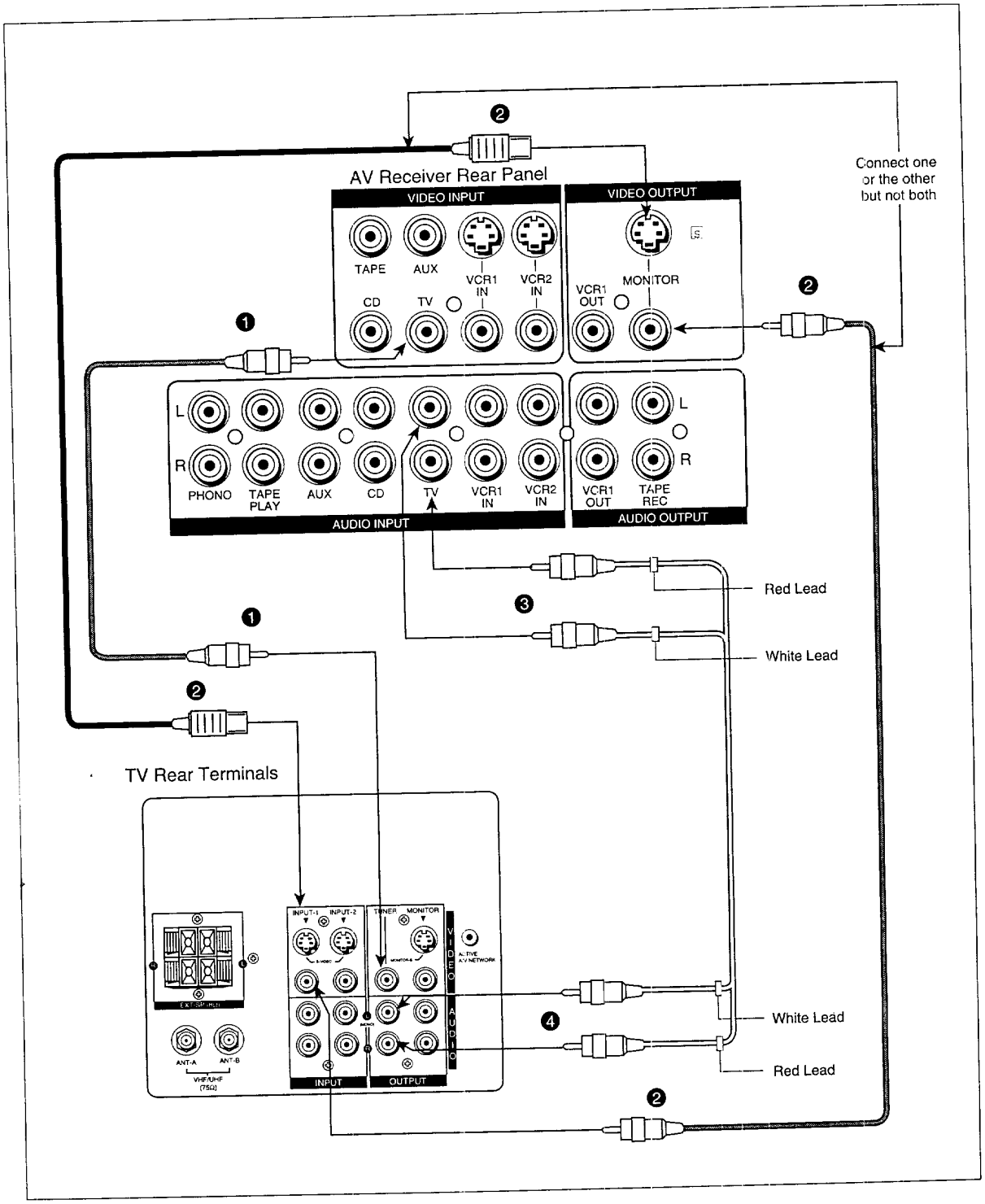
Procedure

❶ Connect one end of a video cable to the TV VIDEO INPUT terminal of the home theater receiver. Connect the other end of this cable to the VIDEO TUNER OUTPUT terminal on the back of the television.

❷ Do ONE (not both) of the following:
- Connect a video cable to the VIDEO MONITOR OUT terminal on the back of the receiver. Connect its other end to the INPUT-1 VIDEO INPUT terminal on the television.
- Connect an S-video cable to the S-VIDEO OUT terminal on the VCR. Connect the other end of this cable to the INPUT-1 S-VIDEO INPUT terminal on the television.

❸ Connect audio cables to the TV AUDIO INPUT terminal of the home theater receiver. Use the red cable to connect the right (R) channel and the white cable to connect the left (L) channel.

❹ Connect the other ends of these cables to the left and right AUDIO TUNER OUTPUT terminals on the television.

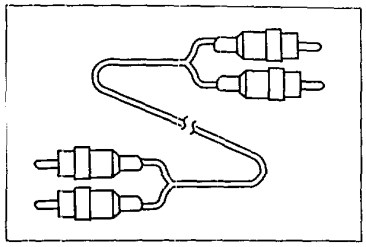

AV Receiver Rear Panel
VIDEO INPUT
VIDEO OUTPUT
TAPE
AUX
VCR1 IN
VCR2 IN
CD
TV
VCR1 OUT
MONITOR
Connect one or the other but not both
L
R
PHONO
TAPE PLAY
AUX
CD
TV
VCR1 IN
VCR2 IN
VCR1 OUT
TAPE REC
AUDIO INPUT
AUDIO OUTPUT
Red Lead
White Lead
TV Rear Terminals
INPUT-1
INPUT-2
TUNER
MONITOR
ANT-A
ANT-B
VHF/UHF (75Ω)
INPUT
OUTPUT
White Lead
Red Lead

TV + audio system

equipment you will need

To hook-up an audio system, you will need:

- one set of RCA pin-type audio cables.



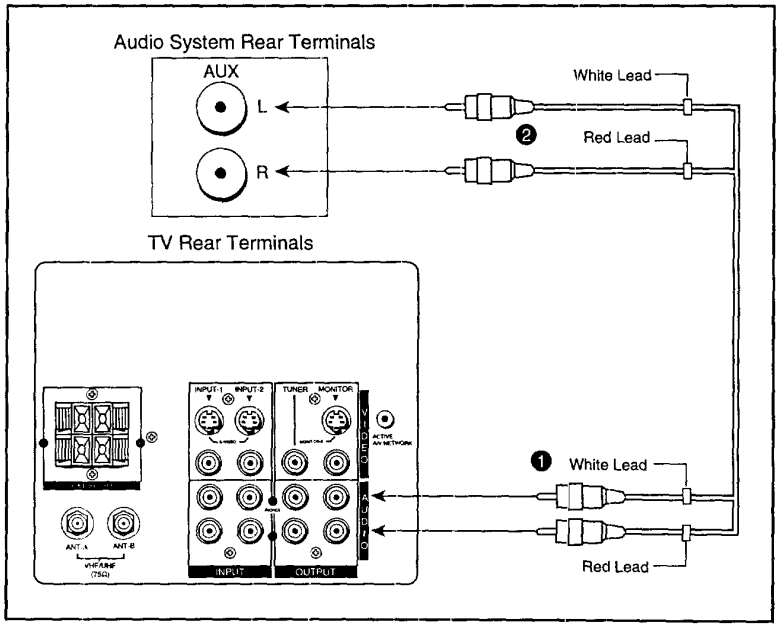
Procedure

1. Connect audio cables to the AUDIO MONITOR OUTPUT terminals on television. Use the red cable to connect the right (R) channel and the white cable to connect the left (L) channel.

2. Connect the other ends of these cables to the AUX IN terminals on the back of the audio system.

3. Turn off the television's speakers. To do this, press the AUDIO button on the control panel or remote control until you see the "Speaker:" display. Set the speakers to "External" by pressing the ADJUST buttons. See "Adjusting the sound," page 65.

4. Set the audio system's input to the AUX position.



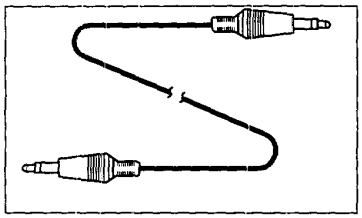
You should make this connection in addition to one of the other connections in this chapter, not instead of other connections.

TV + Mitsubishi products that have A/V Network terminals

The A/V Network is a special system that Mitsubishi developed to make it easier to operate your system with one remote control. When the supplied cable is connected between two Mitsubishi products with the A/V Network, you can point the remote control at one product and it will "pass" the command to the other.

equipment you will need

- one A/V network cable (included with the TV).



Procedure

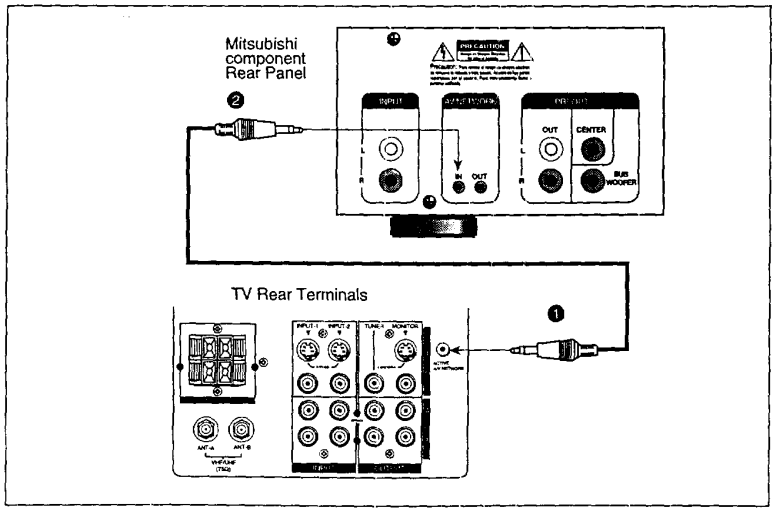
❶ Connect one end of an A/V network cable to the ACTIVE A/V NETWORK terminal on the back of the TV.

❷ Connect the other end of this cable to the A/V NETWORK IN terminal on the back of a Mitsubishi component that has an A/V network terminal.

❸ You can now point your component remote (such as a VCR remote) directly at the television. The A/V cable will "pass" the remote commands to the component.

▷**Important:** You should make this connection in addition to one of the other connections in this chapter, not instead of other connections.

▷**Important:** Check the owner's guide of each A/V Network component for more information.



CHAPTER THREE

Operating Your TV

Now that your TV is connected to a cable system, an antenna, and possibly some external components, it's time to enjoy your equipment. This chapter will explain how to operate the TV, first focusing on functions that are basic and easy and then explaining some advanced features.

This chapter explains:

- **Getting Started**
- **Using the Advanced Features**

♦ Getting Started

This section is designed to get you started enjoying your new TV. If you follow these procedures one by one, you will soon begin discovering everything your television can do.

You'll find information on:

- **Adjusting the color purity,**
- **Using the remote control to operate cable boxes and other brands of VCRs,**
- **Turning the TV on/off,**
- **Selecting the input source,**
- **Changing channels,**
- **Understanding the on-screen menus,**
- **Setting the clock,**
- **Memorizing channels,**
- **Adding and deleting channels,**
- **Setting the A/V Network,**
- **Renaming the inputs,**
- **Selecting the menu language,**
- **Using video mute,**
- **Choosing a menu display,**
- **Adjusting the sound,**
- **Adjusting the picture, and**
- **Using the closed caption decoder.**

Using the remote control to operate cable boxes and other brands of VCRs

operating Mitsubishi components

This TV's remote control has four "layers": the TV layer, the VCR-A layer, the VCR-B layer, and the CABLE layer. Each layer can be used to operate a different component in your A/V system. You select the layer you want to use by pressing one of the "select" buttons across the top of the remote control. The TV layer is programmed to operate your Mitsubishi TV, and the VCR-A and VCR-B layers are programmed to operate Mitsubishi VCRs.

The following buttons are available when using this TV set.

- power button
- pause button
- mute control
- super quick view button
- quick view button
- volume control
- input button
- channel control
- enter button
- audio and video controls
- menu button
- cancel button
- display button
- home button
- off-timer button
- number buttons
- PIP controls
- PLAY button
- quick program button

operating cable boxes or other manufacturers' VCRs

If you have a cable box or a VCR from another manufacturer, you can "set-up" the remote control to operate these components. The VCR-A layer, VCR-B layer, and CABLE layer can each be set-up to operate a VCR or a cable box.

setting up the remote control to operate your VCR

1. Turn off your VCR.
2. Press one of the select buttons across the top of the remote to choose the layer you want to set up: VCR-A, VCR-B, or CABLE.
3. While holding in the POWER button on the remote control, enter the code number listed in the chart on the following page for your brand of VCR. Be sure to enter both digits of the code number. If more than one number is listed, try the first one.
4. Release the POWER button.
5. Press the POWER button again. Your VCR should turn on. If the VCR turns on, your remote control is now set to operate your VCR.

If your VCR does not turn on, repeat the instructions, trying each code number listed for your brand of VCR. If none of these code numbers work, try each number, 01 through 20.

If your VCR is this brand...	...enter this code	If your VCR is this brand...	...enter this code
Mitsubishi (A)	01	Philips	03, 10, 11
Mitsubishi (B)	02	Quasar	03
Canon	03	RCA	08, 13, 20
Emerson	04, 05	Sanyo	14
Funai	06	Scot	15
GE	03	Sharp	16
Goldstar	07	Sony	17, 18
Hitachi	08	Sylvania	03, 10, 11
JVC	09	Symphonic	06
Magnavox	03, 10, 11	Teknika	04, 06
Multitech	06	Toshiba	15
NEC	12	Totevision	07
Panasonic	03	Zenith	19
Philco	03, 10		

setting up the remote control to operate your cable box

1. Turn on your cable box.
2. Press one of the select buttons across the top of the remote to choose the layer you want to set up: VCR-A, VCR-B, or CABLE.
3. While holding in the POWER button on the remote control, enter the code number listed in the chart on the next page for your brand of cable box. Be sure to enter both digits of the code number. If more than one number listed, try the first one.
4. Release the POWER button.
5. Press the POWER button again. Your cable box should turn off. If the cable box turns off, your remote control is now set to operate your cable box. If your cable box does not turn off, repeat the instructions above, trying each code number listed for your brand of cable box. If none of these numbers work, try each number, 51 through 99.

Using the remote control to operate cable boxes and other brands of VCRs (cont.)

If your cable box is this brand...	...enter this code	If your cable box is this brand...	...enter this code
Zenith	51	Tocom	67, 68, 72
Hamlin	52, 53, 69	Panasonic	63, 70
Jerrold	54, 57, 58, 59, 60, 85, 87	Macom	71
G.I.	55, 56	Philips	73, 74, 75, 76, 77,
Oak	61, 62, 82		93, 94, 95, 96, 97, 98, 99
Pioneer	64, 65, 84	Regency	79
Scientific Atlanta	66, 86, 88, 89, 91, 92		

▷**Important:** After setting up your remote, be sure that your cable box can be turned on with the POWER button. Some of the cable boxes can be turned on with the CHANNEL buttons or the number buttons.

▷**Important:** Sometimes manufacturers will change their products, or they may use more than one code. If this is the case, your remote may not be able to operate your VCR or cable box.

▷**Important:** Each layer (CABLE, VCR-A, or VCR-B) can be set for either a cable box or a VCR.

▷**Important:** When you replace the batteries in your remote control, the remote will usually return to its initial setting. You may need to set up your remote again.

using your remote control to operate your VCR

After you have set up your remote control for your particular brand of VCR, you can use the remote to operate your VCR.

1. Use the select buttons across the top of the remote control to choose the layer that you "set up" to operate your VCR: VCR-A, VCR-B, or CABLE.

2. Point the remote control at the VCR and press the desired buttons.

If you are using a Mitsubishi VCR, you will be able to use all of the buttons on the remote control to operate your VCR except for MUTE, VOLUME and the PIP function buttons, which will always operate TV itself.

If you are using another brand of VCR, you can use the POWER, CHANNEL, REC, STOP, PAUSE, REW, PLAY and FF buttons to operate your VCR.

using your remote control to operate your cable box

After you have set up your remote control for your particular brand of cable box, you can use the remote to operate your cable box.

1. Use the select buttons across the top of the remote control to choose the layer that you "set up" to operate your cable box: VCR-A, VCR-B, or CABLE.

2. Point the remote control at the cable box and press the desired buttons.

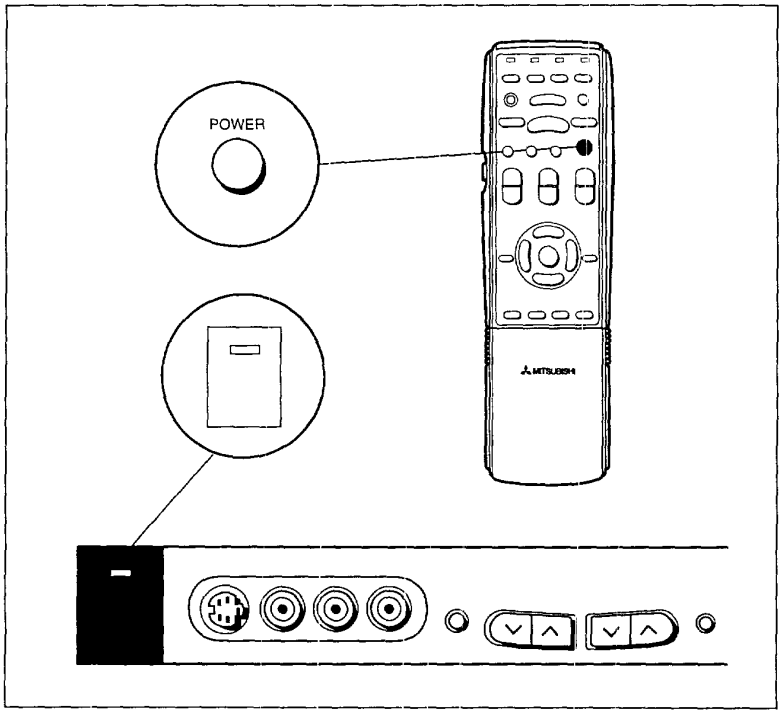
▷**Important:** Only the POWER and CHANNEL buttons can be used to operate your cable box.

Turning the TV on/off

▷**Important:** Before using the remote control to operate the TV, press the "TV" select button at the top the remote control.

Use the POWER button on either the control panel or the remote control to turn the TV on and off. The power indicator will light up in green when you turn the TV on.

▷**Important:** There is always a small amount of current flowing into the TV, even when the power is turned off. This maintains any changes to the TV's settings and operates the built-in clock and timing functions. Unplugging the set will erase these settings, requiring you to set them again. Unplug the TV only when it won't be used for a long time.



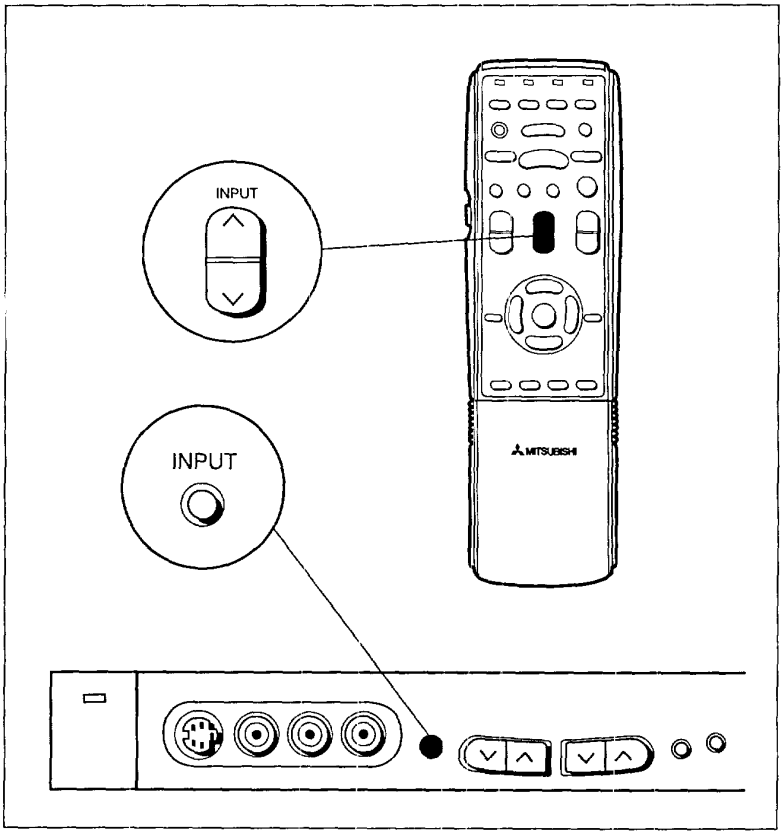
▷**Important:** If you turn on the TV immediately after plugging it into an outlet, it will display the message, "Power interrupted. Please reset the clock."

▷**Important:** When you turn your TV on for the first time, the screen may be displaying the "Select Language" menu. You should select the on-screen language you want to use. For more information, see page 62, "Selecting the menu language."

Selecting the input source

If you connected components such as VCRs, camcorders, or laserdisc players to your TV, you will need to change the input source to view the signals from these components.

To select an input source, press the input button (INPUT) on the control panel or on the remote control.



You can choose between the following input sources:

- Ant-A or Ant-B (antennas or cable systems connected to the antenna terminals),
- Input-1 or Input-2 (components connected to the terminals on the back of your television), or
- Input-3 (a component connected to the terminals on the front of the television).

The name of the input you have selected will be displayed briefly in the corner of the screen.

Changing channels

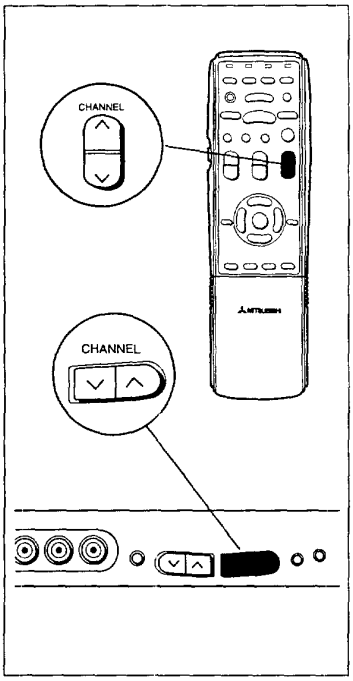
Your TV offers you four ways of changing channels once their numbers have been programmed into channel memory:

- selecting channels one-by-one with the channel controls,
- directly accessing a channel by pressing the number buttons,
- using the special Quick View option to switch to a particular memorized channel, and
- using the Super Quick View function to alternate between channels on a user-chosen list.

▷**Important:** To change channels faster, use either of the following procedures:

- Enter three digits for every channel number, using zeros where needed. (For example, enter "004" to view channel 4 and "028" to view channel 28.)
- Press the ENTER button after selecting the number of the channel. (For example, press "4" and "ENTER" to view channel 4.)

▷**Important:** Cable channel numbers 0 and greater than 126 are unassigned. TV stations 0, 1 and 70 through 999 are unassigned. If you select one of these channel numbers, your TV will not change channels.

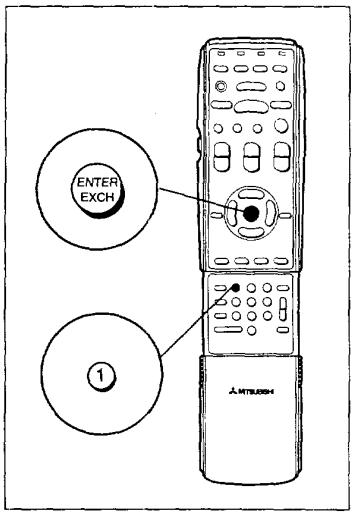


changing channels one-by-one

To change channels:

1. Press one of the channel controls (CHANNEL) on the control panel or on the remote control. The TV will automatically tune to the next memorized channel.

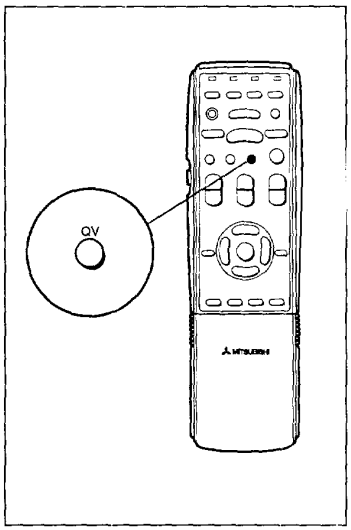
▷**Important:** You cannot change channels one-by-one until available channels have been programmed into memory. (See "Memorizing channels," page 58.)



changing channels directly

To move directly to a particular channel without going through the programmed channels in-between:

1. Use the number buttons on the remote control to select the number of the channel you want to view.
2. Press the ENTER button.

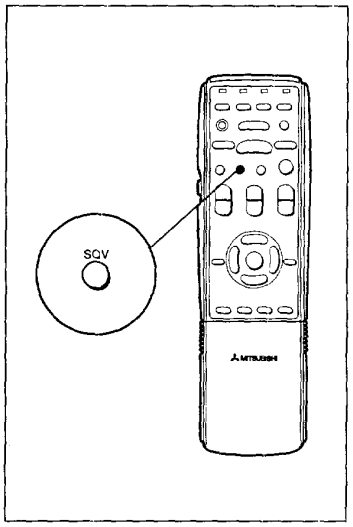


using the Quick View option

Quick View allows you to memorize a particular channel and switch to it quickly.

1. Tune to the channel you wish to memorize.
2. Press and hold the QV button for about 2 seconds. When you release the button, the channel numbers will appear on the screen, indicating that you have memorized that channel.
3. After changing to another channel, press the QV button to immediately return to the memorized channel.

▷**Important:** The memorized QV channel will remain the same until you memorize a new channel.



using the Super Quick View option

To view selected channels programmed into Super Quick View memory:

1. Enter the desired channel into Super Quick View memory. (See "Using the Super Quick View tuning," page 77.)
2. Press the SQV button repeatedly to view the SQV channels in sequence.

Understanding the on-screen menus

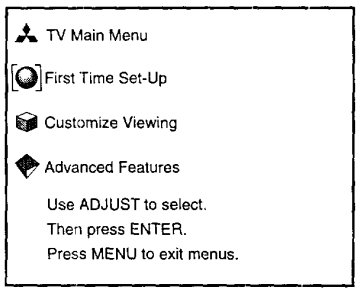
One of the distinctive features of this TV is an on-screen menu system that provides step-by-step instructions for using some of the TV's special capabilities.

When using any of the on-screen menus, please keep the following in mind:

- The on-screen menus will turn off if no item is selected within 5 minutes.
- Unavailable menu items are indicated in light blue letters instead of the normal white letters.
- Some on-screen menu items must be set before other items are available. For example, "Set the timer" will only be available if "Set the clock" has been set.
- You can exit the on-screen menus any time by pressing the MENU button repeatedly. You will then return to regular TV viewing.
- You can also exit the on-screen menus by pressing the HOME button on the remote control.

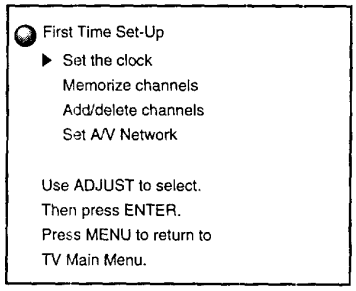
Setting the clock

Your TV contains an internal clock. If there is a broadcaster in your area that is sending the current time along with its regular broadcast signal, then your TV can automatically set its clock with this signal. Otherwise, you can set the clock yourself.



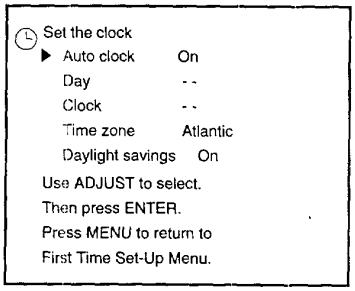
❶ Press the MENU button on the remote control. The TV Main Menu will appear on the screen.

❷ Use the ADJUST buttons to select "First Time Set-Up." Press ENTER.



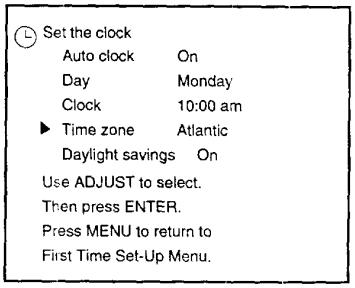
❸ You will see the "First Time Set-Up" screen. Use the ADJUST buttons to select "Set the clock." Press ENTER.

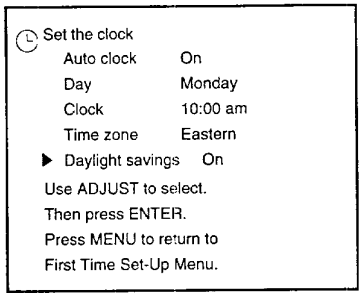
❹ If you want your TV to set its clock automatically, use the ADJUST buttons to set "Auto clock" to "On"; if you want to set the clock yourself, set "Auto clock" to "Off," and see "setting the clock yourself," on page 57.



using automatic clock setting

- Use the ADJUST buttons to set "Auto clock" to "On." Press the ENTER button.
- Use the ADJUST buttons to select the "Time zone" you live in. The available time zones are: Atlantic, Eastern, Central, Mountain, Pacific, Alaska and Hawaii.
- Press the ENTER button.



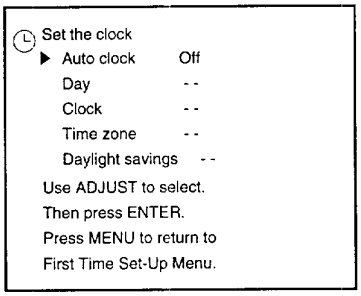


- If you follow daylight savings time, use the ADJUST buttons to set "Daylight savings" to "On." Otherwise, set it to "Off." Press ENTER.
- The automatic clock set-up is completed. The screen will return to the "First Time Set-Up" menu.

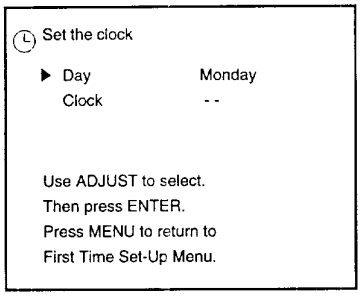
▷**Important:** The TV's clock will not be set until you tune your TV to a channel that is broadcasting the time via Extended Data Services (XDS). If your TV loses power, you will need to tune to that channel again to reset your clock.

▷**Important:** If you set "Daylight savings" to "On," your TV will adjust the clock by one hour when daylight savings begins and ends.

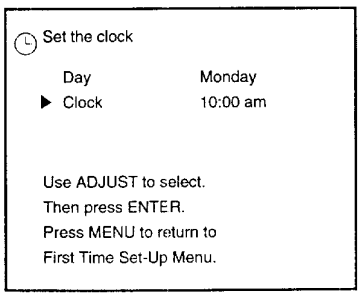
setting the clock yourself



- Use the ADJUST buttons to set "Auto clock" to "Off." Press ENTER.



- Use the ADJUST buttons to select the "Day." Press ENTER.

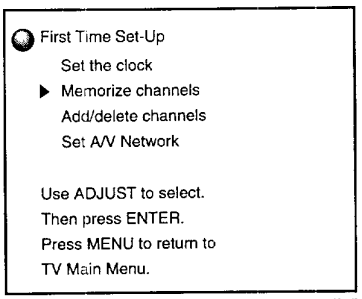


- Use the ADJUST buttons to set the "Clock."
- After you have set the "Day" and "Clock," press the ENTER button to start the clock.

The screen will return to the "First Time Set-Up" menu.

Memorizing channels

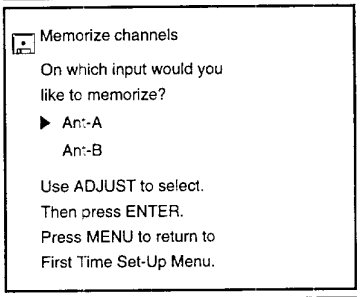
You can use the menus to automatically memorize the channels your TV can receive. Once channels are memorized, you can scan through them using the channel controls on the remote control and control panel.



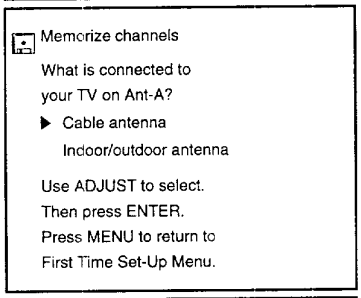
❶ Press the MENU button on the remote control. The TV Main Menu will appear on the screen.

❷ Use the ADJUST buttons to select "First Time Set-Up." Press ENTER.

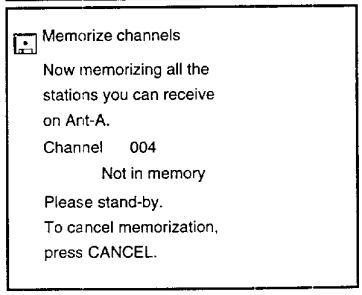
❸ Use the ADJUST buttons to select "Memorize channels." Press ENTER.



❹ Use the ADJUST buttons to select the terminal (Ant-A or Ant-B) to which you attached an antenna or cable from your cable system. Press ENTER. (If you made a connection to each terminal, you should memorize the channels for the one now, and for the other later.)



❺ Use the ADJUST buttons to choose the type of antenna you connected: Cable antenna or Indoor/outdoor antenna. Press ENTER.

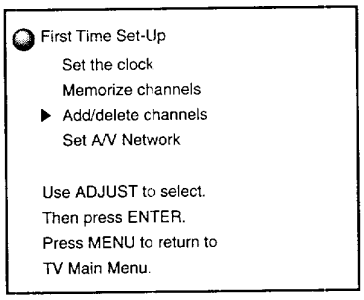


❻ You will see a message that channel memorization is in progress. A channel being added to memory will be labeled "In memory." Channels not being added will be labeled "Not in memory." You can stop channel memorization at any time by pressing CANCEL.

▷**Important:** Channel controls will work only after channels have been memorized. After memorizing, use the channel controls (CHANNEL) to advance sequentially to the next memorized channel. Use the number buttons to select individual channels.

Adding and deleting channels

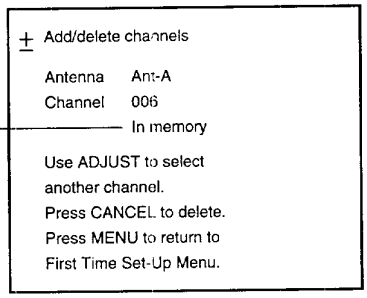
After all available channels have been memorized with the "Memorize channels" feature, channels with weaker signals can be added or deleted with the following procedure.



❶ Press the MENU button on the remote control. The TV Main Menu will appear on the screen.

❷ Use the ADJUST buttons to select "First Time Set-Up." Press ENTER.

❸ Use the ADJUST buttons to select "Add/delete channels." Press ENTER.



Either "In memory" or "Not in memory" will appear.

❹ The "Add/delete channels" screen will appear. Use the ADJUST buttons to select the channel you would like to add or delete.

(You can also use the CHANNEL controls and the INPUT button on the remote control to change channels and inputs.)

❺ If a channel is labeled "In memory," use the CANCEL button to remove it from memory. If a channel is labeled "Not in memory," use the ENTER button to add it to memory.

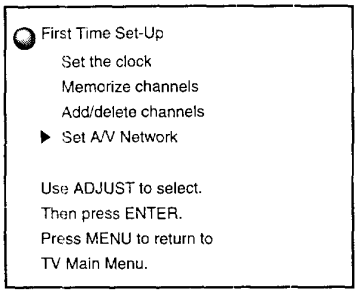
❻ When you are finished adding and deleting channels, press the HOME button to return to normal TV viewing.

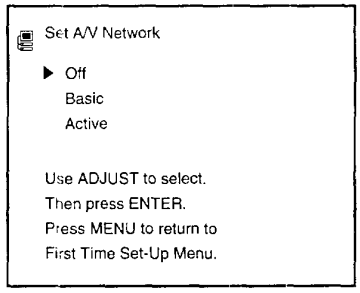
Adding a channel to memory allows you to tune to the channel with the channel controls. If a channel is not in memory, you can only tune to it with the number buttons.

▷**Important:** In this menu, you can use the CHANNEL buttons to change channels and the INPUT button to switch inputs.

Setting the A/V Network

The A/V Network is a special system that Mitsubishi developed to make it easier to operate many products with one remote control. When the A/V Network is connected between two Mitsubishi products, you can point the remote control at one product and it will "pass" the remote control command to the other. To set up the A/V Network:





1. Press the MENU button on the remote control. The Main Menu will appear on the screen.
2. Use the ADJUST buttons to select "First Time Set-Up." Press the ENTER button.
3. Use the ADJUST buttons to select "Set A/V Network." Press the ENTER button.
4. Use the ADJUST buttons to select "Active," "Basic," or "Off." Check the rear terminals of your VCR, then use the chart below to determine how you should set your TV.
5. Press the HOME button to return to normal TV viewing.

If your VCR has a rear terminal that reads:	...and you have set your VCR to:	...then set your TV to:
A/V Network	–	Basic
Active A/V Network	Off	Basic
Active A/V Network	Active	Active
Does not have an A/V Network rear terminal	–	Off

If you are not sure how to set your VCR's A/V Network setting, refer to your VCR's owner's guide.

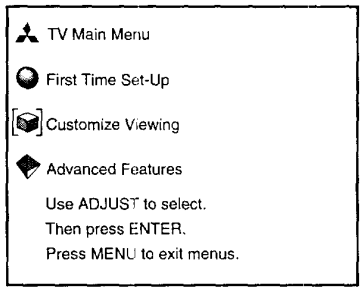
▷**Important:** If connected, the A/V Network can still be used to pass remote control signals when the TV's A/V Network setting is "Off."

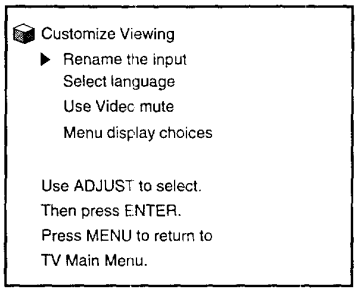
▷**Important:** If you do not use the A/V Network system, set "A/V Network" to "Off," or there may be problems selecting channels on your TV.

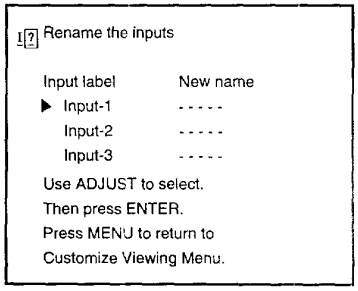
▷**Important:** If you are using a Mitsubishi VCR with A/V Network or Active A/V Network, you should have connected it to the INPUT-1 of your TV.

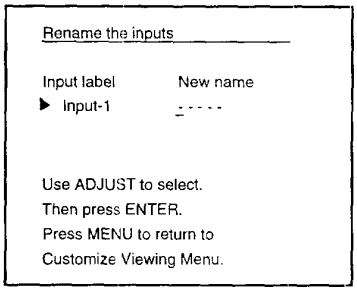
Renaming the inputs

This feature allows you to rename the inputs so that you can keep track of components you have connected to your TV. For example, you might name one input "VCR," and another one "DISC." After renaming, the new name will appear on the screen display. (The original names are "Input-1," "Input-2," and "Input-3.")






Rename the inputs
Input label
New name
▶ Input-1 - - - - -
Input-2 - - - - -
Input-3 - - - - -
Use ADJUST to select.
Then press ENTER.
Press MENU to return to
Customize Viewing Menu.



❶ Press the MENU button on the remote control. The TV Main Menu will appear on the screen.

❷ Use the ADJUST buttons to select "Customize Viewing." Press ENTER.

❸ You will see the "Customize Viewing" screen. Use the ADJUST buttons to select "Rename the input." Press ENTER.

❹ Use the ADJUST buttons to select the input you want to rename (Input-1, Input-2, or Input-3). Press ENTER.

❺ Use the ADJUST buttons and the ENTER button to select each letter in the new name.

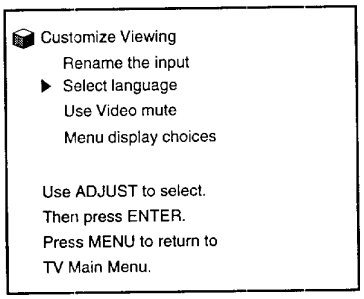
You can rename the inputs using letters (A – Z), numbers (0 – 9), or symbols (: / . , ( ) ! " # $ % & ' blank + ; < = > ? blank -).

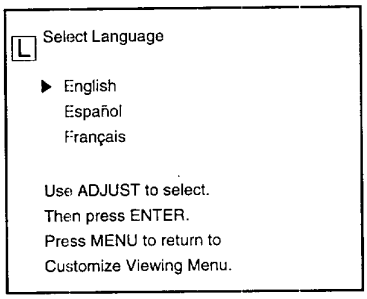
If you press the CANCEL button while setting the name, the cursor will move one position to the left. You can clear the entire name by pressing CANCEL when the cursor is at the left-most position.

❻ When you are finished, press the MENU button; the screen will return to the "Customize Viewing" menu.

Selecting the menu language

This TV allows you to display the on-screen menus in one of three languages: English, Spanish and French.

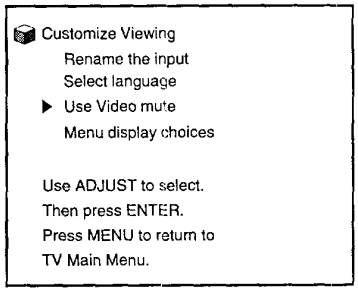


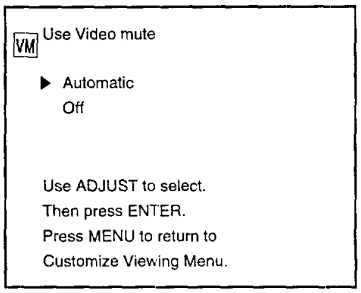


1. Press the MENU button on the remote control. The TV Main Menu will appear on the screen.
2. Use the ADJUST buttons to select "Customize Viewing." Press the ENTER button.
3. Use the ADJUST buttons to select "Select language." Press the ENTER button.
4. Use the ADJUST buttons to select the language for the on-screen menu.
5. Press the ENTER or MENU button to return to the "Customize Viewing" menu.

Using video mute

When you use the video mute functions, your TV will display a blue screen whenever it is receiving a very weak TV signal or a weak VCR signal. If you want to try viewing a weak signal, you can turn the video mute off.



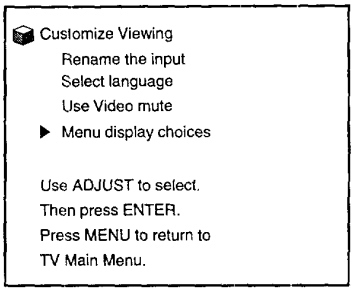


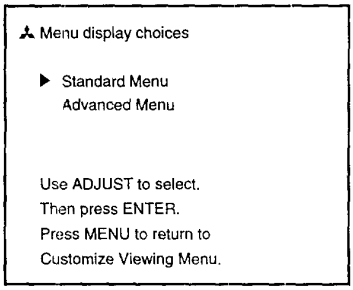
1. Press the MENU button on the remote control. The TV Main Menu will appear on the screen.
2. Use the ADJUST buttons to select "Customize Viewing." Press ENTER.
3. Use the ADJUST buttons to select "Use Video mute." Press ENTER.
4. Using the ADJUST buttons, select "Automatic" to turn video mute on or "Off" to turn video mute off.
5. Press the ENTER or MENU button to return to the "Customize Viewing" menu.

Choosing a menu display

You can display the on-screen menus in one of two ways. The "Standard Menu," which is illustrated in this manual, provides step-by-step instructions for all features. The "Advanced Menu" lets you select each feature directly by its name and icon.

Your TV's normal setting is the "Standard" menu. To switch between the Standard and Advanced menus:



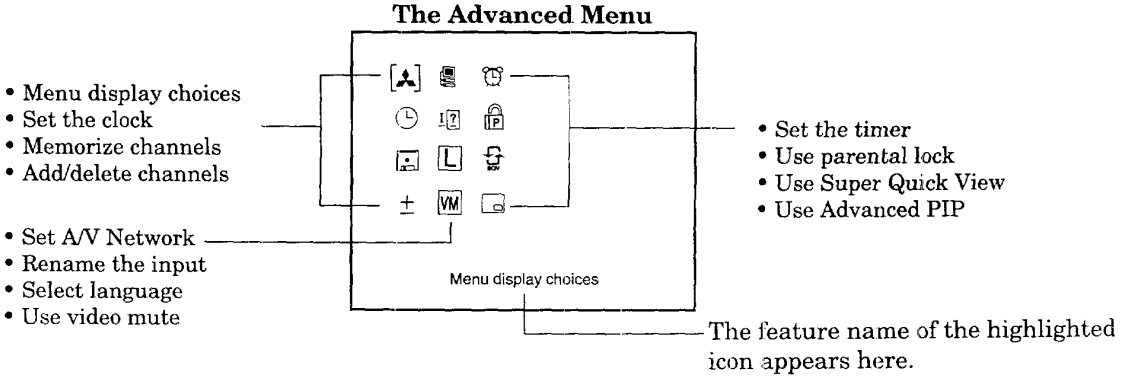


1. Press the MENU button on the remote control. The TV Main Menu will appear on the screen.
2. Use the ADJUST buttons to select "Customize Viewing." Press ENTER.
3. Use the ADJUST buttons to select "Menu display choices." Press ENTER.
4. Use the ADJUST buttons to select "Standard Menu" or "Advanced Menu."
5. Press the ENTER or MENU button.

If you select the "Standard Menu," the screen will return to the "Customize Viewing" menu. If you selected the "Advanced Menu," the screen will show the Advanced Main Menu (shown below.)

To use the Advanced Menu, use the ADJUST buttons to highlight the icon of the feature you want to use, then press ENTER. The name of the highlighted icon appears at the bottom of the screen.

The Advanced Menu


• Menu display choices
• Set the clock
• Memorize channels
• Add/delete channels
• Set A/V Network
• Rename the input
• Select language
• Use video mute
• Set the timer
• Use parental lock
• Use Super Quick View
• Use Advanced PIP
Menu display choices
The feature name of the highlighted icon appears here.

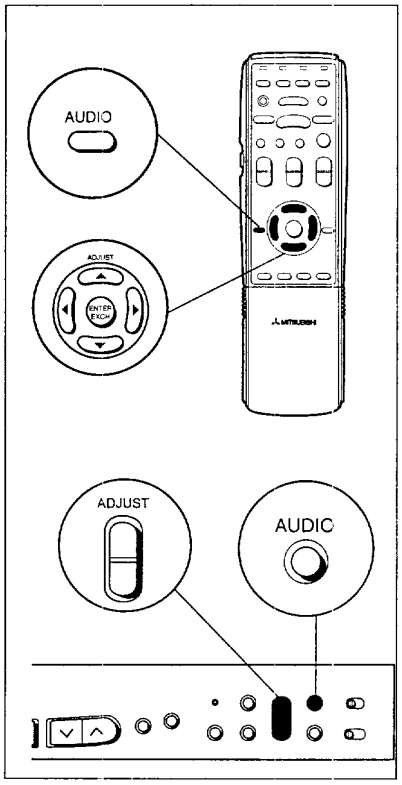
Adjusting the sound (cont.)

The "**Speaker**" function allows you to play the TV's sound through the internal speaker or the external speakers.

- Choose "**Internal**" if you want to play the TV's sound through the TV's built-in speaker.
- Choose "**External**" if you connected speakers to the speaker terminals on the rear of the TV, or if you want to play the sound of your TV through an audio system.

The "**Monitor out**" function determines how the TV will send an audio signal to an audio system or home theater receiver. Your choices are "Variable" or "Fixed."

- If you choose "**Fixed**," the TV will send out an audio signal at a fixed volume level. The level will not change when you adjust the TV's volume. Use the controls on your audio system to adjust the volume. The "Fixed" setting is most useful when you can control the audio system's volume with a remote control.
- If you choose "**Variable**," the TV's audio output will change when you change the TV's volume. If you use this setting with an audio system, turn the TV's volume all the way down, set the audio system's volume to an average setting, then turn the TV's volume up until you can hear the signal.



adjusting the audio functions

When adjusting the audio functions, you can use the buttons on the remote control or on the control panel.

❶ Press the AUDIO button repeatedly until the function you want to adjust appears on-screen. (The functions appear at the center of the bottom of the screen.)

❷ While the function is still on the screen, use the ADJUST buttons to adjust the function's setting.

❸ The functions will disappear from the screen after a few seconds. (You cannot adjust a function if it is not on the screen.)

Adjusting the sound

Your TV allows you to customize and adjust the settings of its audio functions. This section gives you descriptions of each audio function, then explains how to adjust the functions.

descriptions of audio functions

The "**Listen to**" function allows you to determine how your TV will receive an audio signal and play back the sound that you hear. You can set this function to "Stereo," "S.A.P.," and "Mono."

- For almost all situations, you should choose "**Stereo**." With this setting, the TV will play stereo broadcasts in stereo and mono broadcasts in mono. If a channel is broadcasting in stereo, the word "Stereo" will be displayed when you tune to that channel.
- Some TV stations will broadcast a separate audio programming, or **S.A.P.**, signal. This signal is an additional soundtrack that you can't hear during normal TV viewing. An S.A.P. signal might be related to the program you are watching (e.g., a soundtrack in a foreign language), or it might be unrelated (e.g., a weather report). If a channel is broadcasting an S.A.P. signal, the letters "SAP" will appear on-screen when you tune to that channel. Choose "**Listen to: SAP**" to hear the S.A.P. signal.
- Use the "**Mono**" setting if you are receiving a weak audio signal. This setting will reduce background noise. However, with this setting, the TV will only play in mono, even if the program you are watching is in stereo.

The "**Bass**" function provides a scale that controls the volume of low frequency sound.

The "**Treble**" function provides a scale that controls the volume of high frequency sound.

The "**Balance**" function provides a scale that adjusts the level of sound between the left and right speakers. Adjust the scale until the sound seems to come equally from both speakers.

The "**Audio expansion**" function creates a stereo effect when you are watching a non-stereo program. You can turn this function on or off.

- Select "**On**" if you are watching a non-stereo program.
- Select "**Off**" if you are watching a stereo program.

The "**Level sound**" keeps the volume of the TV from suddenly changing when you change channels or switch inputs. You can turn this function to on or off.

- Select "**On**" if you want the TV to keep the volume near a certain level, even when you change channels or switch inputs.
- Select "**Off**" if you want the TV to play the volume of each channel or input as it is broadcast.

Adjusting the picture

Your TV allows you to customize and adjust the settings of its video functions. This section gives you descriptions of each video function, then explains how to adjust the functions.

descriptions of video functions

The "**Tint**" function provides a scale that adjusts the proportion of red to green in the picture. This determines the delicate tones of color.

The "**Color**" function provides a scale that determines the intensity of the color.

The "**Contrast**" function provides a scale that controls the level of white-to-black in the picture. When the contrast is low, you will be able to see the variety of shades in the darker images on the screen. When the contrast is high, the screen's dark images will appear more uniformly black, but this will also make the colors on the screen seem more vibrant.

The "**Brightness**" function provides a scale that controls the overall brightness of the picture.

The "**Sharpness**" function provides a scale that adjusts the detail and clarity of the picture.

The "**Video NR**" (**Video Noise Reduction**) function is used to reduce the grainy or snowy images that can occur with weak signals. This function can be turned on or off.

- Set this function to "**Off**" during normal TV viewing.
- Set this function to "**On**" if you are receiving a weak signal with a grainy or snowy picture.

The "**Color temp**" (**Color temperature**) function allows you to set how the TV will display white images. Your choices are "Low," "High," or "Middle."

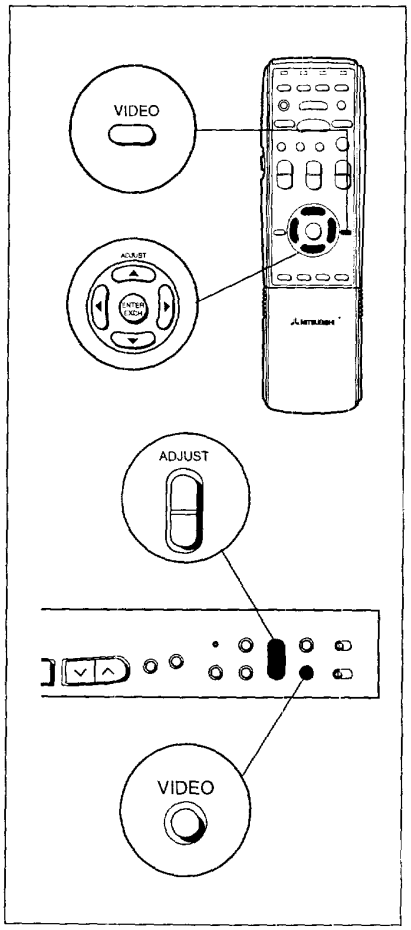
- With the "**Low**" setting, white images on-screen will have a yellow cast to them.
- With the "**High**" setting, white images on-screen will have a blue cast to them.
- With the "**Middle**" setting, white images on-screen will be balanced between yellow and blue.

The "**Color bias**" function is used to help your TV reproduce colors, especially skin tones, as realistically as possible. You can set this function to "Average," "Accurate," or "Skin tone."

- The "**Average**" setting will adjust the skin tones based on the other colors on the screen.
- The "**Accurate**" setting does not make adjustments to the picture. Use this setting when watching professionally produced video tapes and laserdiscs (such as rental movies).
- The "**Skin-tone**" setting will add warmth and red tones to the picture.

The "CC" function is used to control the closed caption decoder. For details, see "Using the closed caption decoder," page 69.

adjusting the video functions



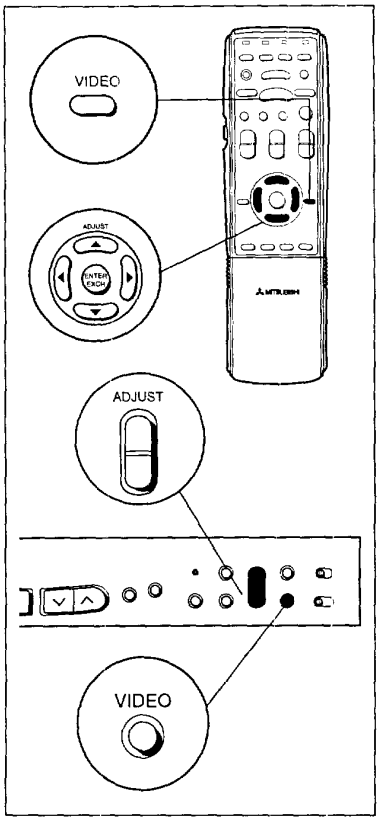
When adjusting the video functions, you can use the buttons on the remote control or on the control panel.

❶ Press the VIDEO button repeatedly until the function you want to adjust appears on-screen.

(The functions appear at the center of the bottom of the screen.)

❷ While the function is still on the screen, use the ADJUST buttons to adjust the function's setting.

❸ The functions will disappear from the screen after a few seconds. (You cannot adjust a function if it is not on the screen.)



adjusting the closed captioning decoder

When adjusting the closed caption decoder, you can use the buttons on the remote control or on the control panel.

To use the closed caption decoder:

1. Press the VIDEO button until the closed captioning display appears on the screen.
2. Press the ADJUST buttons to select the captioning setting you want.

   (See the previous page for an explanation of the caption settings.)

uses for closed captioning

Closed captioning was initially designed so that those with hearing difficulties could better enjoy viewing television. However, closed captioning can also be used in other ways, such as:

- helping children learn to read,
- learning a foreign language, and
- using the television without disturbing others.

▷**Important:** If you cannot display any captions on the screen, please keep in mind that not all broadcasters, video tapes, or laserdiscs supply closed caption signals.

Additionally, captions might not appear:
- if you are playing a video tape that is worn or deteriorated, or
- if you are starting to play a laserdisc from still or search mode.

Using the closed caption decoder

Many broadcasters now supply closed captioning information along with their regular broadcasts. Your TV can decode that information and display it on the TV screen.

There are two types of captioning that broadcasters can send: "**standard**" and "**text**."

Standard captioning is related to the program that is being shown. Standard captioning usually follows the dialogue of the characters on-screen.

Text captioning often contains information such as weather or news. Text captioning blocks out your view of the program you are watching.

Your TV can decode four different "standard captioning" signals and four different "text captioning" signals on each TV channel. However, each station may be broadcasting only one or two captioning signals, or none at all.

When setting the decoder you can choose:

- to display one of four "standard captioning" signals (CC :1, CC :2, CC :3, CC :4),
- to display one of four "text captioning" signals (CC : Text 1, CC : Text 2, CC : Text 3, CC : Text 4),
- to display captions when muting (CC : When Muting),
- or to turn the captions off (CC : Off).

If you select " CC : When Muting," the standard captioning signal (CC :1) will appear whenever you use the MUTE button.

▷**Important:** If you set the decoder to a "standard" caption setting and tune to a broadcaster that is not sending a caption signal, no captions will appear.

▷**Important:** If you set the decoder to a "text" setting and tune to a broadcaster that is not sending a text signal, a large black rectangle will block your screen.

▷**Important:** The content of captions are determined by the broadcaster. If your captions show strange characters, misspellings, or odd grammar, it is not a malfunction of the TV.

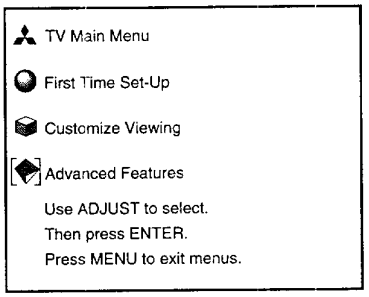
♦ Using the Advanced Features

This section explains how to use some of the more advanced features. You'll learn about:

- **Setting the timer,**
- **Using the parental lock,**
- **Using the Super Quick View tuning, and**
- **Selecting an advanced PIP function.**

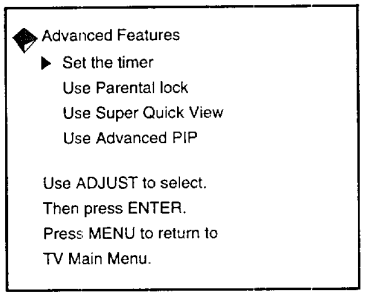
Setting the timer

This special feature allows you to program the TV to turn on automatically at a time that you set. To set the timer:

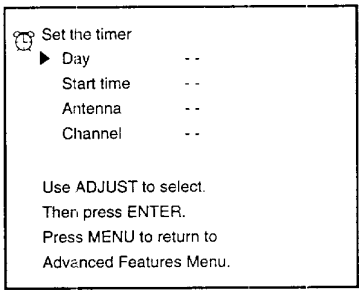


❶ Press the MENU button on the remote control. The TV Main Menu will appear on the screen.

❷ Use the ADJUST buttons to select "Advanced Features." Press ENTER.



❸ You will see the "Advanced Features" screen. Use the ADJUST buttons to select "Set the timer." Press ENTER.



❹ Use the ADJUST buttons and the ENTER button to set Day, Start time, Antenna, and Channel.

After setting the timer, make sure that the program timer indicator is lit. The indicator will light in orange when the TV is turned on and light in red when the TV is turned off. The indicator will light in green when using the menus, or when you have locked the TV.

If you press the CANCEL button while setting the timer, the arrow will move to the previous item. To clear the timer, press CANCEL with the arrow next to "Day."

▷**Important:** When the timer turns the TV on, the display will flash. If you do not press any TV function buttons for about 5 minutes, the TV will automatically turn off. Press a TV function button (such as the display button) to keep the TV on and turn off the flashing display.

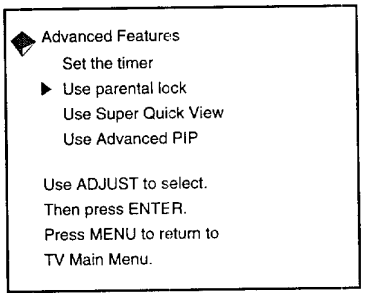
Using the parental lock

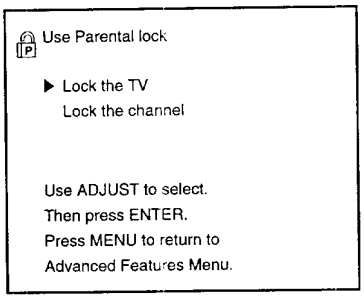
This special feature allows you to lock the entire TV during a certain time period or lock up to ten individual channels. (You cannot lock the TV and lock individual channels at the same time.) When you turn on the lock, you enter a 4-digit secret code that will allow you to turn off the lock later.

If you try to turn on a locked TV, view a locked channel, or the locking "time period" begins, you will see a message asking you to enter the secret code. If you don't enter the code within five minutes, the TV will turn off or tune to an unlocked channel.

If you enter the secret code, the message will disappear and the lock will be turned off temporarily. However, the TV or channels will be locked again after you turn off the TV. This will continue until you turn the lock off permanently. To turn the lock off permanently, follow the procedure later in this section.

using parental lock





1. Press the MENU button. The TV Main Menu will appear.
2. Use the ADJUST buttons to select "Advanced Features." Press ENTER.
3. Use the ADJUST buttons to select "Use parental lock." Press ENTER.
4. Use the ADJUST buttons to select "Lock the TV" or "Lock the channel." Press ENTER.

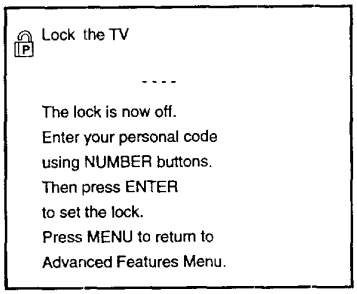
   If you selected "Lock the TV," see page 74.

   If you selected "Lock the channel," see page 75.

▷**Important:** If you turn the parental TV lock on, you cannot use the timer.

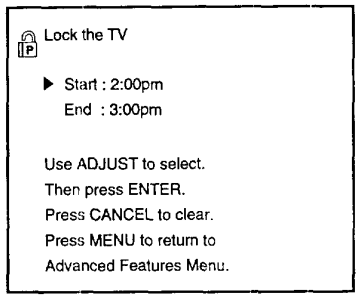
Using the parental lock (cont.)

locking the TV

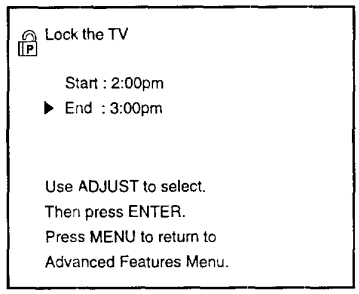


- The message for locking the TV will appear.
- Enter a four-digit secret code using the number buttons (0-9); then, press the ENTER button.

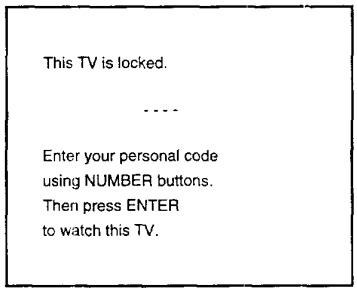
  You can cancel the code if you press CANCEL before you press ENTER.



- Use the ADJUST buttons to select "Start"; press ENTER.
- Use the ADJUST buttons to set the time at which you want the TV lock to turn on. Press ENTER.



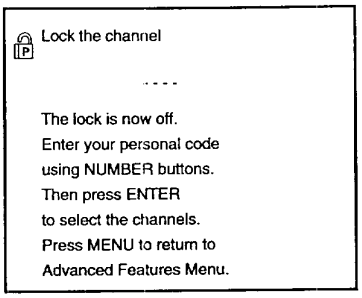
- Use the ADJUST buttons to set the time at which you want the TV lock to turn off. Press ENTER. If you want the TV lock to be in effect all the time, set the same "End" time as you set for the "Start" time.
- Press HOME to exit the menus.



- When you turn on a locked TV, or if the lock's "time period" begins, you will be asked to enter your four-digit secret code. Enter the code to temporarily disable the lock. The lock will be enabled again when you turn the TV off.

>**Important:** If you turn on a locked TV and the clock has not been set, you will be asked to enter your secret code.

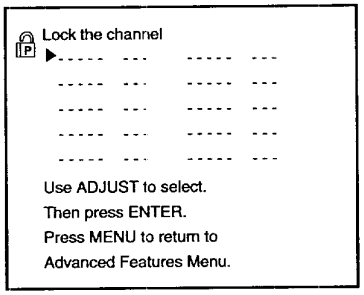
locking channels



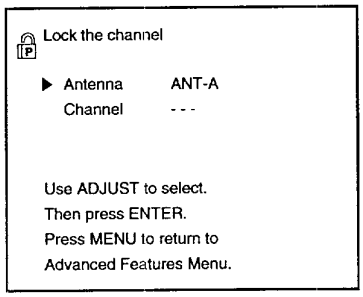
- The message for locking a channel will appear.

- Enter a four-digit secret code using the number buttons (0-9); press ENTER.

  You can cancel the code if you press CANCEL before you press ENTER.

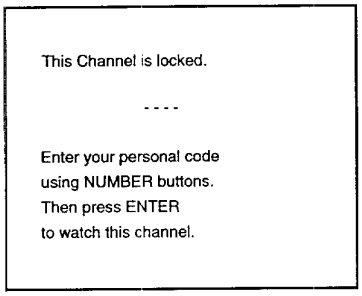


- You will see the channel lock set-up screen. Use the ADJUST buttons to select a position. Press ENTER.



- Use the ADJUST buttons to select the input (Ant-A or Ant-B) that has the channel you want to lock. Press ENTER.

- Use the ADJUST buttons, CHANNEL buttons, or number buttons to choose the channel you want to lock. Press ENTER.

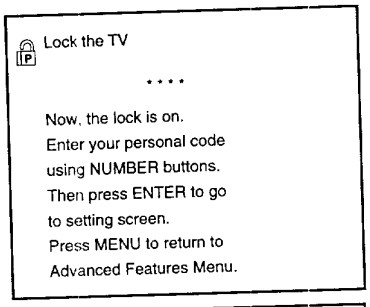


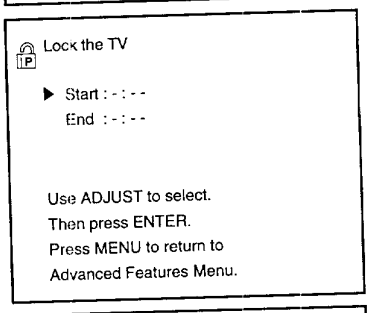
- Repeat the steps above to lock additional channels. When you are finished, press the HOME button to turn off the menus.

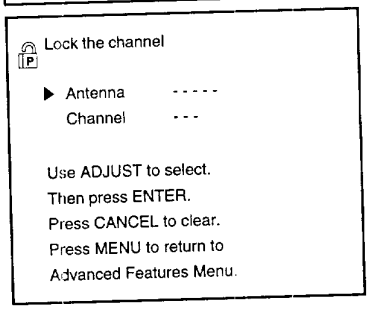
- When you try to view a locked channel, you will be asked to enter your four-digit secret code. Enter the code to temporarily disable the lock. The lock will be enabled again when you turn the TV off.

Using the parental lock (cont.)

canceling or changing parental lock





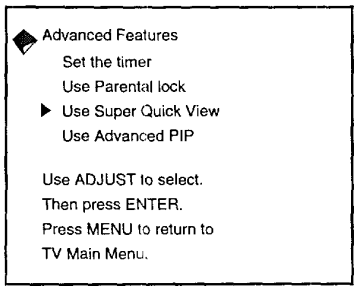

Lock the channel
▶ Antenna - - - - -
Channel - - -
Use ADJUST to select.
Then press ENTER.
Press CANCEL to clear.
Press MENU to return to
Advanced Features Menu.

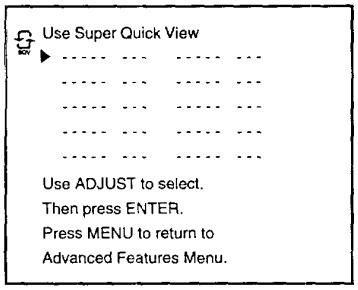
1. Press the MENU button. The TV Main Menu will appear on the screen.
2. Select "Advanced Features" using the ADJUST buttons; press ENTER.
3. Select "Use parental lock" using the ADJUST buttons; press ENTER.
4. Enter the four digits of your secret code using the number buttons (0-9); press ENTER.
5. If you were using the TV lock, use the ADJUST buttons to select "Start," then press the CANCEL button to turn off the TV lock.
6. If you were using the channel lock, use the ADJUST buttons to place the cursor next to the channel whose lock you want to cancel. Press ENTER.
7. Press the CANCEL button to unlock that channel, or use the ADJUST buttons to change the channel to a new one.
8. Press the MENU button to return to the "Advanced Features" menu.

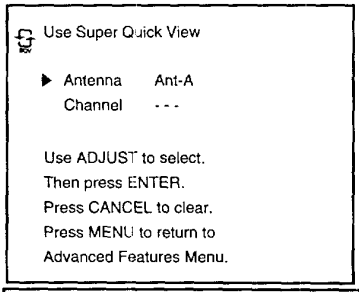
▷**Important:** If you forget your four-digit secret code, please see page 103.

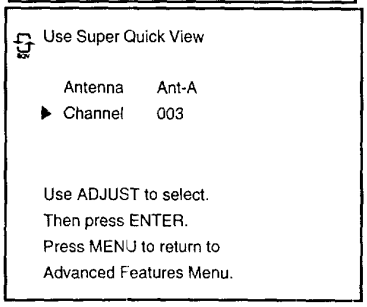
Using the Super Quick View tuning

Super-Quick-View allows you to cycle through a list of up to ten numbers with the SQV button. You use the menus to add channels to the list or to remove channels from the list. You can also add channels to the list using only the remote control.









customizing the Super Quick View list with the menus

❶ Press the MENU button on the remote control. The TV Main Menu will appear on the screen.

❷ Use the ADJUST buttons to select "Advanced Features." Press ENTER.

❸ Use the ADJUST buttons to select "Use Super Quick View." Press ENTER.

❹ Use the ADJUST buttons to select a position in the list; press ENTER.

❺ Use the ADJUST buttons to select an input (Ant-A or Ant-B). Press ENTER.

You can clear the input by pressing CANCEL.

❻ Use the ADJUST buttons, CHANNEL buttons or number buttons to add a channel to the list; press ENTER. You can clear a channel by pressing the CANCEL button.

❼ Repeat steps ❹, ❺, and ❻ to customize the Super Quick View memory.

❽ Press the MENU button to exit this menu.

Using the Super Quick View tuning (cont.)

adding channels to the list with the remote control

1. Use the channel controls or number buttons to tune the TV to the channel you want to add to the list.

2. Press and hold the SQV button for about 2 seconds. When you release the button, the letters "SQV" will appear under the channel number, indicating that the channel has been added to Super Quick View memory.

>**Important:** If the Super Quick View memory is full, the letters "SQV" will flash when you release the SQV button.

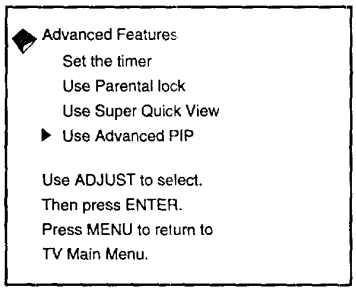
>**Important:** Once you've added a channel to the SQV memory, the letters "SQV" appear under the channel number any time the channel number is displayed, even if you tune to the channel in another manner.

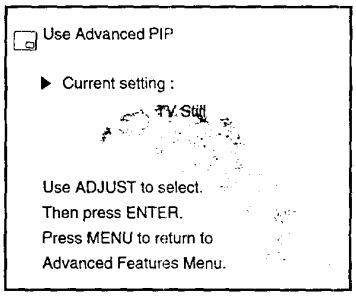
Selecting an advanced PIP function

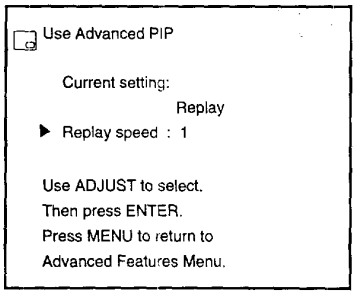
When you are using the PIP features, there are special functions you can use. Before using these advanced functions, you need to choose one in the menu. These advanced functions are:

- TV Still,
- Snap-shot, or
- Replay.

In "TV Still," the PIP image switches between still and moving. In "Snap-shot," you can view and move several frozen PIP images. In "Replay," you can view still PIP images in sequence for a "strobe" animation effect. These images will appear in sets of three (from a total of seven stored images) at the speed you select. (See "Using the Advanced Picture-in-Picture (PIP) Modes," page 86.)







1. Press the MENU button on the remote control. The TV Main Menu will appear on the screen.
2. Use the ADJUST buttons to select "Advanced Features." Press ENTER.
3. Use the ADJUST buttons to select "Use Advanced PIP." Press ENTER.
4. Use the ADJUST buttons to select the advanced function you would like to use: TV Still, Snap-shot, or Replay. Press ENTER.

- If you select "Replay," the next option will be "Replay speed." Use the ADJUST buttons to set the replay speed from 1 to 9. (1=short interval and 9=long interval.) Press ENTER. (See "Using the Replay feature" on page 92 for more information.)

5. Press the MENU button to return to the "Advanced Features" menu.

CHAPTER FOUR

Using the Special Features

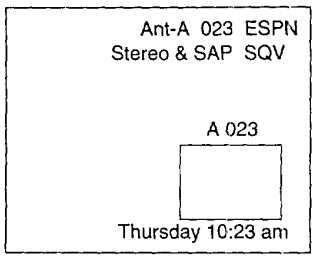
In addition to the basic and advanced features explained in the previous chapter, this TV offers the user several special features not generally available on other brand TVs. This chapter will explain how to use these distinctive features. It contains the following topics:

- **Understanding the On-Screen Displays**
- **Using the Off-Timer**
- **Using the Advanced Picture-in-Picture (PIP) Modes**
- **Using the Active A/V Network Feature**

♦ Understanding the On-Screen Displays

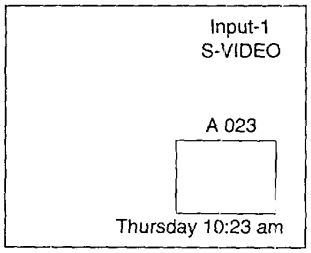
Your TV provides an on-screen summary of the current settings for the TV or cable channels, as well as the information related to Extended Data Services (XDS). XDS allows broadcasters to supply you with the current time, channel information (such as call letters and the network name), and program information (such as the program name and program description). To view this information, press the display button (DISPLAY) on the remote control to cycle through all the information.

The first time you press DISPLAY, you will see a display like this, if your main source is an antenna:



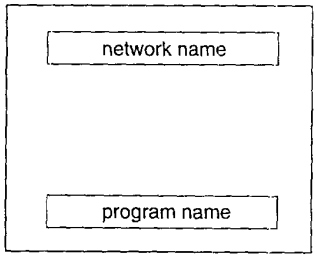
❶ This setting shows:
- the antenna (A) and channel number (23),
- this channel's call letters (if they are being supplied by XDS),
- stereo and SAP are available,
- this channel is programmed into Super Quick View memory,
- PIP input source,
- current day of the week, and
- time.

The first time you press DISPLAY, you will see a display like this, if your main source is an input:



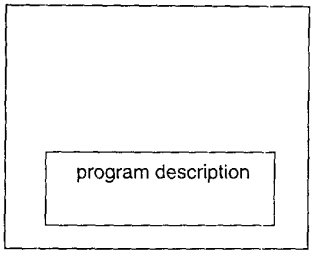
This setting shows:
- the input name (Input-1),
- an S-video cable was connected,
- PIP input source,
- current day of the week, and
- time.

The second time you press DISPLAY, you will see a display like this:



❷ This shows where the network name and program name will appear if the broadcaster is supplying that information via XDS.

The third time you press DISPLAY, you will see a display like this:



❸ This shows where the program description will appear if the broadcaster is supplying that information via XDS.

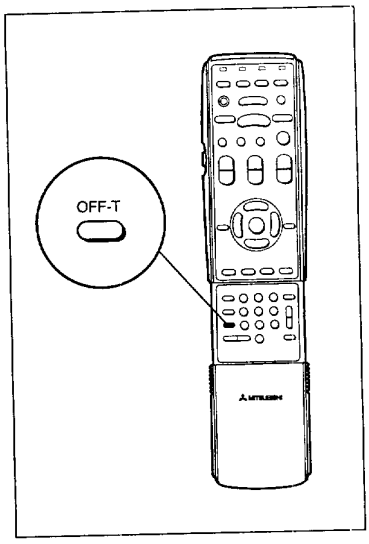
▷**Important:** If the broadcaster is not supplying information via XDS, then an error message will appear ("No name available," "No description available"). Also, the "call letters" will not appear.

♦ Using the Off-Timer

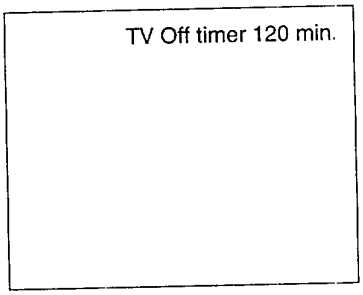
This special feature allows you to set the TV to turn off automatically. You can set the TV to turn off after a period of time ranging from 10 to 120 minutes, in ten minute intervals. In this section you will learn:

- **Setting the off-timer, and**
- **Changing or canceling the off-timer.**

Setting the off-timer



❶ Press the OFF-T button on the remote control. The off-timer display will appear on the screen.

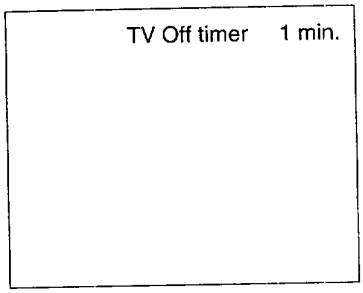


❷ Select how long you want the TV to stay on by repeatedly pressing the OFF-T button. The time will decrease in 10 minute intervals each time you press the button.

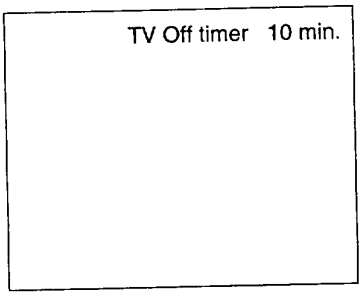
❸ When you reach the time you want, stop pressing the button. The off-timer display will disappear after a few seconds.

❹ To view the amount of time left in the off-timer press the OFF-T button once. The on-screen display shows the amount of time remaining.

▷**Important**: During the last minute before the TV turns off, "Off-timer 1 min." will flash in red to remind you that the off-timer is set.



Changing or canceling the off-timer



❶ Press the OFF-T button on the remote control. An on-screen display will indicate the amount of time remaining until the TV will turn off.

❷ Repeatedly press the OFF-T button to change the remaining time or to cancel the off-timer. The off-timer is canceled when "– – –" appears instead of the remaining time.

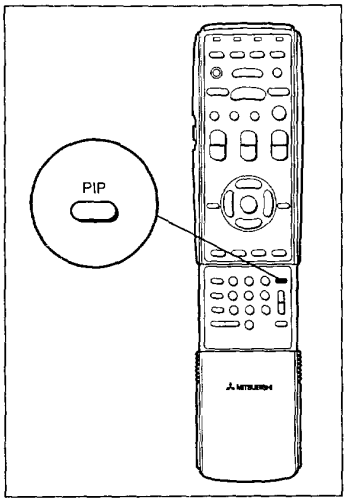
♦ Using the Advanced Picture-in-Picture (PIP) Modes

One of the special features of the TV is the advanced picture-in-picture (PIP) mode, which allows you to view two different sources at the same time. In this section you'll learn:

- **Activating the PIP image,**
- **Selecting the source of the PIP image,**
- **Selecting the PIP channel,**
- **Exchanging the PIP image and the main image,**
- **Moving the PIP image,**
- **Freezing the PIP image,**
- **Using the Snap-shot feature, and**
- **Using the Replay feature.**

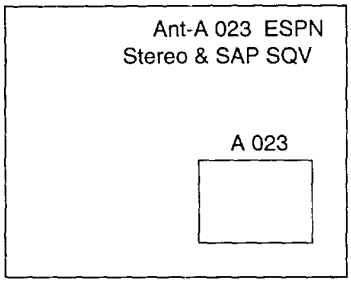
>**Important:** You must have a VCR connected to the TV to see two different live action pictures when using PIP.

Activating the PIP image

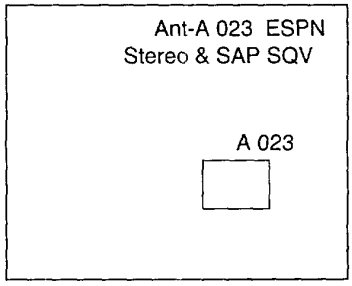


❶ Select the number of the TV channel you want to view with the channel control.

❷ Press the PIP button.



❸ A PIP image will appear in the bottom right corner of the screen.



❹ Press PIP again within 10 seconds; the PIP image will reduce to a smaller size.

(If you wait longer than 10 seconds the PIP image will disappear when you press the PIP button.)

❺ Press the PIP button once again to cancel the PIP image.

▷**Important:** When the main image is black and white, the PIP image will also appear in black and white.

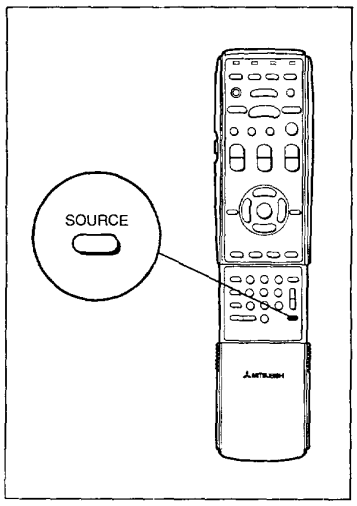
▷**Important:** If you move the PIP image and then turn it off, it will remain in its new position when you turn it on again.

Selecting the source of the PIP image

When you first activate the PIP image, as described on the previous page, you will probably see the same picture in the small image as you do on the main image. This is because both images have the same "source." A "source" is any signal that your TV is receiving through the antenna terminals or through the input terminals.

If you want to see a different picture in the PIP image, you need to change its source. Since your main image is usually a signal being received through an antenna terminal, you need to select one of the input terminals as the PIP's source.

These instructions explain the most common way to see a different picture in the PIP image: using a VCR connected to Input-1 as a PIP source.



❶ Turn your VCR on and select a channel on the VCR that is different than the channel you see on your TV screen.

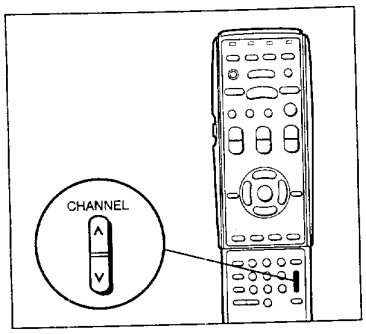
❷ Press the SOURCE button on the remote control repeatedly until the VCR picture appears in the PIP image

❸ If you want to select a source other than the VCR, continue pressing the SOURCE button. The source will change as follows:

→TV→Input-1→Input-2→Input-3→

▷**Important:** To change the main image while in PIP mode, press the input button (INPUT) on the control panel or on the remote control.

Selecting the PIP channel

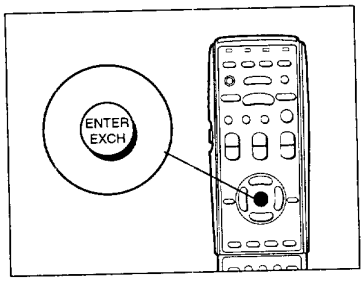


If you have connected a Mitsubishi VCR to your TV with the A/V network, you can easily change the channel of the PIP image. Simply press the PIP channel button (CHANNEL) on the remote control to change the channel of the PIP image.

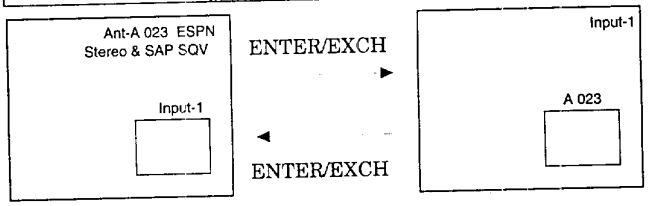
See "Using the Active A/V Network" for more information.

▷**Important:** When the source of both the main image and PIP image is the TV, the PIP channel button will change the channels of both the main image and PIP image.

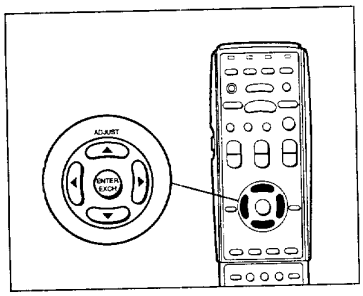
Exchanging the PIP image and the main image



Press the ENTER button to exchange the contents of the main (background) image and the PIP image.



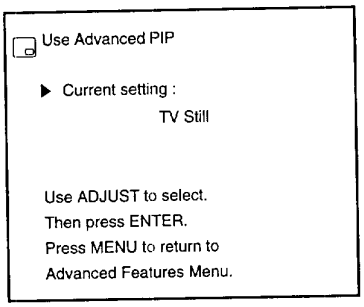
Moving the PIP image



Press the ADJUST buttons to move the PIP image.

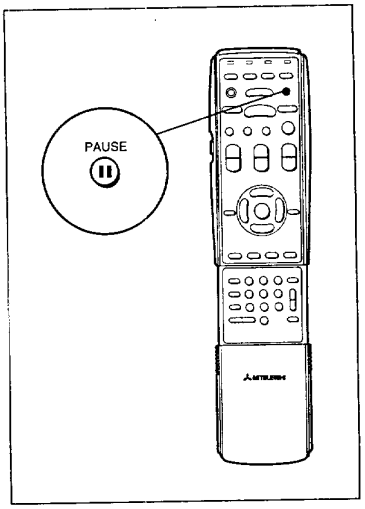
▷**Important:** If you move the PIP image and then turn it off, it will remain in its new position when you turn it on again.

Freezing the PIP image



❶ Select "Use Advanced PIP" in "Advanced Features" menu and set it to "TV Still." (See "Selecting an advanced PIP function," page 79.)

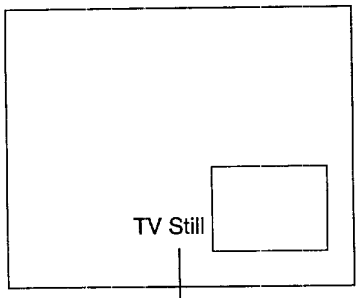
❷ Use the MENU button to return to the normal picture.



❸ Press the PAUSE button to freeze the PIP image on the screen.

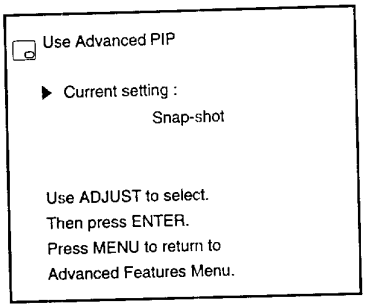
❹ Press PAUSE again to cancel the image freezing.

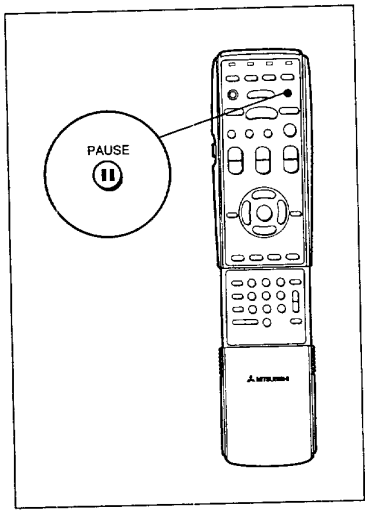
▷**Important:** If you press the pause button while viewing a picture without a PIP image, a PIP image will appear and be frozen.



disappears after a few seconds

Using the Snap-shot feature





❶ Select "Use Advanced PIP" in the "Advanced Features" menu and set it to "Snap-shot." (See "Selecting an advanced PIP function," page 79.)

❷ Use the MENU button to return to the normal picture.

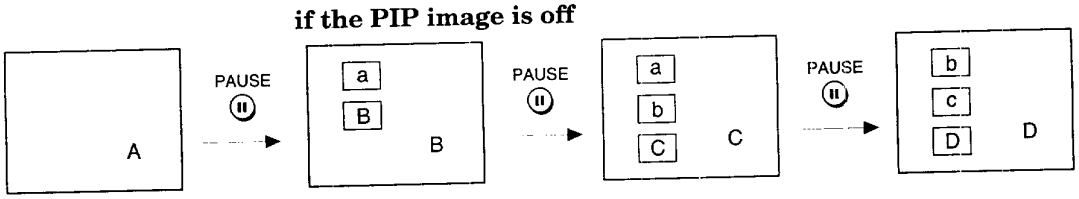
❸ Press the PAUSE button once; a frozen PIP image and a moving PIP image will appear.

❹ Press the PAUSE button again; a third PIP image will appear, moving. The previous two PIP images will be frozen.

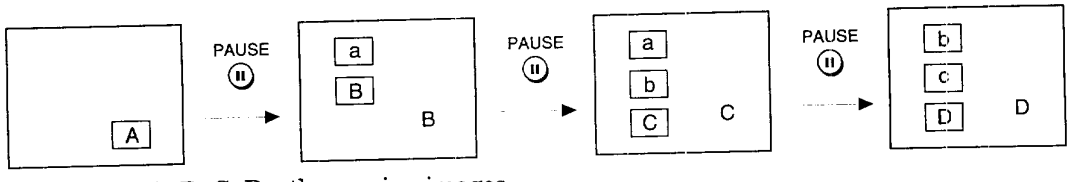
❺ Each time you press the PAUSE button, the PIP images will shift upwards one by one: the top image will be replaced by the second image, the second image will be replaced by the third, and a new moving image will appear in the third space.

❻ To cancel the PIP image, press the PIP button twice.

if the PIP image is off

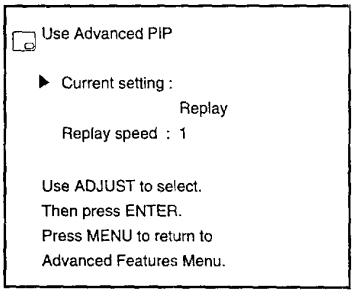


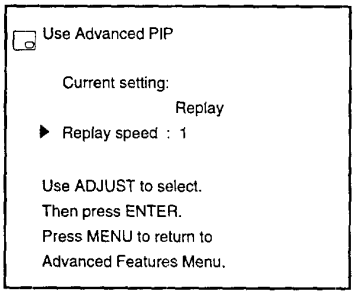
if the PIP image is on

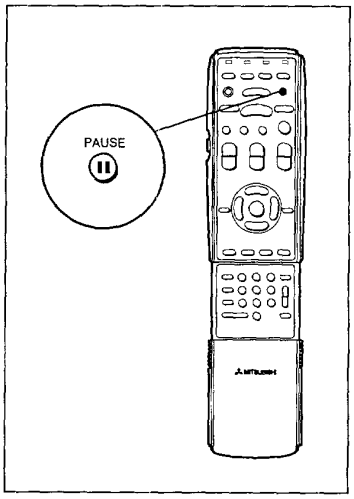


*A, B, C, D: the moving images
*a, b, c, d: the frozen images of A, B, C, and D at the instant the PAUSE button is pressed.

Using the Replay feature





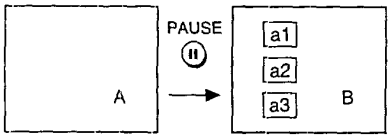


❶ Select "Use Advanced PIP" in the "Advanced Features" menu and set it to "Replay." (See "Selecting an advanced PIP function," page 79.)

❷ Set the replay speed between 1 (short interval) and 9 (long interval).

❸ Use the MENU button to return to the normal picture.

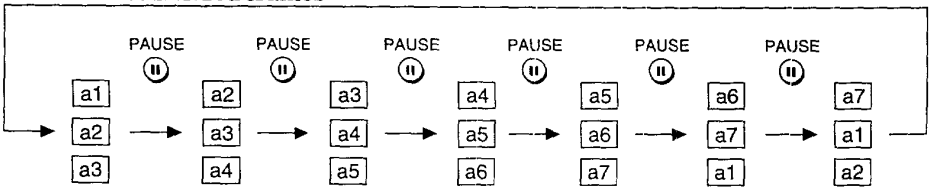
❹ Press the PAUSE button. The TV will memorize seven frames of video from the main image and display the first three of these frames as PIP images. (The interval between the frames is determined by the replay speed set in step ❷.)



❺ Each time you press the PAUSE button, the memorized frames will shift upwards.

❻ To cancel the PIP images, press the PIP button twice.

*a1 - a7 : memorized frames



♦ Using the Active A/V Network Feature

This A/V Network is a special feature that makes it easier to use your TV and your other Mitsubishi A/V components together. When you connect the A/V Network, you can point the remote control at the TV, and it will "pass" the remote control command to the other components.

Additionally, you will gain even more benefits if you have a Mitsubishi VCR equipped for the Active A/V Network. The Active A/V Network allows you to perform many of the commonly used features of your system at the press of just one button.

This section will explain the various features of the Active A/V Network.

before you begin

- You must have connected an A/V Network cable from the Active A/V Network terminal of your TV to the A/V Network IN terminal of your VCR. See "TV + Mitsubishi products that have A/V Network terminals," page 41.
- You must have connected your VCR to Input 1 of your TV.
- You must have set your TV's "A/V Network" setting to "Active" or "Basic." See "Setting the A/V Network," page 60.
- Your VCR's remote control switch (if any) should be set to "VCR-A."
- Your VCR's video mute setting should be turned ON.

▷**Important:** The A/V Network is only available for select Mitsubishi components.

what the Active A/V Network does

The Active A/V Network makes it easier and faster to use the VCR's Quick Program and Play commands and the TV's PIP commands, as described on the next page.

▷**Important:** When using the Active A/V Network, you should always point your remote control at your TV.

using the quick program button (QUICK PROGRAM)

When you press QUICK PROGRAM to begin programming your VCR:

- Active A/V Network will turn on your VCR and bring it to the "Program to Record" screen. (If the VCR's clock has not been set, you will see the "Set the clock" screen. See your VCR's Owner's Guide for information about setting the clock.)
- Active A/V Network will turn on your TV (if it is off), and switch the TV to INPUT-1.

You can program your VCR by pointing your remote control at the TV.

You must press QUICK PROGRAM to end programming your VCR; when you do so:

- Active A/V Network will turn off your VCR (unless a tape is currently playing or recording), if your TV has been set to "Active".
- Active A/V Network will return your TV to the channel it was on before, or turn it off (if it was off originally).

using the PLAY button (AUTO PLAY)

When you press PLAY on the remote:

- Active A/V Network will turn your VCR on and begin playing the tape (if any).
- Active A/V Network will turn your TV on and switch it to INPUT-1.

When you turn your TV off:

- If your TV has been set to "Active," your VCR will turn off, unless it is playing or recording.

using the PIP button (SIMULATED TWO TUNER PIP)

You must be watching a broadcast channel on Antenna-A or Antenna-B to use the Active A/V Network PIP function correctly.

When you press the PIP button on the remote to bring up a PIP image:

- Your VCR will automatically turn on.
- You can see the VCR's picture in the small PIP image.

While the PIP image is on the screen:

- The PIP function buttons (SOURCE, CHANNEL, ENTER/EXCH, ADJUST, PAUSE) will all work in the same manner.
- The PIP CHANNEL button controls the channels on the reduced PIP image. The CHANNEL and number buttons (0 –9) change channels on the main image.

▷**Important:** If you leave the TV turned on and:

- it is set to Input-1, and
- it does not receive a signal for two-and-a-half minutes, and
- you do not use the menus for two-and-a-half minutes, then:

the TV will automatically turn off. When you turn the TV back on, it will be tuned to the last antenna and channel you were viewing.

CHAPTER FIVE

Troubleshooting

Even though you're now familiar with the basic and advanced operations of the TV, you may run into trouble from time to time as you become accustomed to the TV. This chapter offers solutions to some of the common problems you may encounter. We suggest that you consult this chart before contacting a Mitsubishi service representative.

Troubleshooting (cont.)

Problems	Possible Solutions	For More Information
• The remote control doesn't work.	• Check that the batteries are installed correctly.	• See "Getting ready to use the remote control" in Chapter 1 for an explanation of how to install batteries in the remote control.
	• Check that the select button is set to "TV."	• See "Remote control buttons and functions" in Chapter 1, which explains where the select buttons are located.
	• Be sure that you are pointing the tip of the remote control toward the TV from a distance of no more than 20 feet.	• See "Getting ready to use the remote control" in Chapter 1, which contains pointers for using the remote control.
• The TV takes several seconds to respond to button commands.	• Use the ENTER button to avoid delays.	• See "Changing channels" in Chapter 3, which explains the function of the ENTER button.
• You can't access a channel.	• Be sure that the channel you want to view is programmed into memory.	• See "Memorizing channels" in Chapter 3, which explains how to program channels into the TV's memory.
	• Check that the TV is tuned to the correct input source (antenna) for that channel.	• See "Selecting the input source" in Chapter 3, which explains how to change the input source.
• You can't see a different channel in the reduced PIP image.	• Use the SOURCE button to change the source of the PIP image.	• See "Using the Advanced Picture-in-Picture (PIP) Modes" on page 86.
	• Make sure you have a second source, such a VCR, turned on and connected to your TV.	

Problems	Possible Solutions	For More Information
• On-screen displays appear each time you adjust a function.	• This is part of the normal operation of the TV.	• See "Understanding the On-Screen Displays" in Chapter 4 for a full explanation of the on-screen displays.
• There's no sound even when the volume is turned up.	• Check that the MUTE button isn't on.	• See "Remote control buttons and functions" in Chapter 1, which explains the location and function of the MUTE button.
	• The TV's "Listen to" setting may be set to "separate audio program" (S.A.P.).	• See "Adjusting the sound" in Chapter 3, which explains how to adjust the "Listen to" setting.
• You forget the code you used to set the parental lock.	• Use the alternate procedure that doesn't require the use of the code.	• See the Appendix, "Procedure for Bypassing the Parental Lock."
• You can't program the TV to turn on automatically.	• The TV may be locked.	• See "Using the parental lock" under "Using the Advanced Features" in Chapter 3.
• The sound doesn't match the image on screen.	• The TV's "Listen to" setting may be set to "separate audio program" (S.A.P.).	• See "Adjusting the sound" in Chapter 3, which explains how to adjust the "Listen to" setting.
• There is a large black rectangle on the screen.	• The TV has been set to "text" mode, but there is no text information being broadcast.	• See "Using the closed caption decoder" under "Getting started" in Chapter 3.

Caution and care

▶Warning: Don't leave stationary images on-screen for more than 10 minutes. These images can scar the TV, causing permanent damage to the picture tube. Some examples of stationary images are:

- stock-market reports,
- station logos (especially bright ones),
- video game displays,
- shopping channel displays,
- the television's own on-screen displays.

▷Important: If you plan to place speakers next to the TV, make sure they are magnetically shielded. Ordinary speakers will cause distortion in the picture due to their strong magnets. This distortion, however, will not harm the picture tube.

For maximum enjoyment and safe operation of your Mitsubishi Color TV, please read the "IMPORTANT SAFEGUARDS" carefully and apply them properly.

Cleaning

Normally, light dusting with a non-scratching duster will keep your TV clean.

If you want to wipe down your TV, turn it off and unplug it. Then, wipe it gently with a soft cloth slightly moistened with water. You can add a few drops of mild liquid detergent to the water for oily dirt.

DO NOT allow liquid to enter the TV through the ventilation slots.

DO NOT use strong or abrasive cleaners.

DO NOT use spray liquids or cleaners directly on the TV's surface.

DO NOT scrub or rub the TV harshly. Wipe gently.

Calling for service

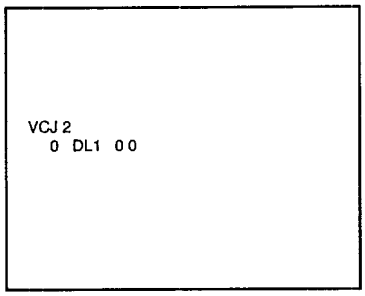
If you are unable to correct a problem with your TV, consult your Mitsubishi dealer or Mitsubishi Authorized Warranty Service Center.

Do not adjust any controls not described in this owner's guide.

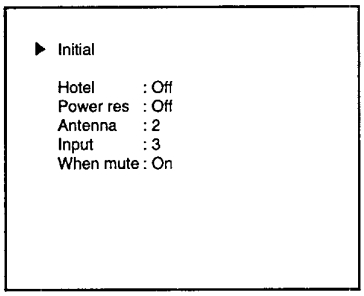
Do not remove the protective back cover of this unit.

If you see one of the following display on your screen, you should not change any settings. These are special displays used by the factory.

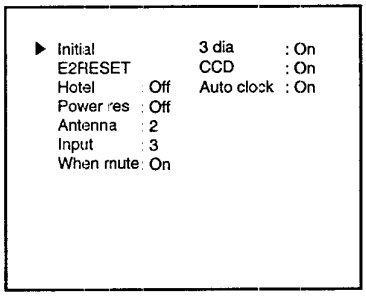
1



2



3



If display "1" appears, turn the TV off. If displays "2" or "3" appear, make sure that all of the on/off settings are the same as the illustrations above and then turn the TV off. If any of the settings are different from the illustrations above, turn the TV off and consult your Mitsubishi dealer or Mitsubishi Authorized Warranty Service Center.

APPENDIX

Procedure for Bypassing the Parental Lock

Cut along dotted line and file after reading.

After you set the lock, you will need the secret code in order to:

- view a locked channel,
- view the locked TV, or
- cancel the lock.

If you forget the code, you can view the locked TV without entering the code. To do this, simply press the buttons on your remote labeled "QV" and "9" at the same time whenever your secret code is requested.

▷**Important:** Unlocking with this procedure is only temporary. To cancel the lock completely, follow the procedure below:

1. Turn on your TV. If the TV requests your secret code, press the "QV" button and the "9" button on the remote control at the same time.
2. Press the MENU button to view the main menu. Use the ADJUST button to select "Advanced Features." Press ENTER.
3. Use the ADJUST button to select "Use Parental Lock." Press ENTER.
4. Press the "QV" button and the "9" button on the remote control at the same time, instead of entering the code.
5. If you were using the TV lock, press the CANCEL button to turn off the TV lock.
6. If you were using the channel lock, use the ADJUST button to place the cursor next to the channel whose lock you want to turn off. Press ENTER.
7. Press the CANCEL button to unlock that channel, or use the ADJUST buttons to change the channel to a new one.
8. Press the MENU button to return to the "Advanced Features" menu.

▷**Important:** You must use the remote control included with this TV. You cannot use a remote control from another Mitsubishi component, and you cannot use any "Universal" remotes from other manufacturers.

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MEMO

MITSUBISHI COLOR TELEVISION OR COLOR MONITOR
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a. **Picture Tube**. For two years from the date of purchase at retail, we will repair or replace, at our option, any defective picture tube without charge for the tube.

b. **Other Parts.** For one year from the date of original purchase at retail, we will repair or replace, at our option, any defective part without charge for the part.

c. All parts used for replacement are warranted for the remainder of the original warranty period.

d. **Labor.** For one year from the date of original purchase at retail, we will provide the labor for a warranty repair by an authorized MITSUBISHI service center without charge.

e. **Notice.** To obtain warranty service, you must notify an authorized MITSUBISHI service center of any defect within the applicable warranty time period.

1. TO OBTAIN WARRANTY SERVICE DURING THE FIRST YEAR:

a. Contact your nearest authorized MITSUBISHI service center, whose name and address can be obtained from your MITSUBISHI dealer or by writing or calling MELA at the address and telephone number provided below.

b. Warranty service will be provided in your home or, if required, at an authorized service shop, provided that your television is located within the geographic territory customarily covered by an authorized MITSUBISHI service center. If not, you must either deliver your television to an authorized service location at your own expense, or pay for any travel and/or transportation costs the service center may charge to and from your home. Actual service labor will be provided without charge.

c. Proof of purchase date from an authorized MITSUBISHI Dealer is required when requesting warranty service. Present your sales receipt or other document which establishes proof and date of purchase. THE RETURN OF THE OWNER REGISTRATION CARD IS NOT A CONDITION OF WARRANTY COVERAGE. However, please return the Owner Registration Card so that we can contact you should a question of safety arise which could affect you.

2. AFTER THE FIRST YEAR, to obtain warranty service for a defective picture tube, you are responsible for delivering the television or monitor to an authorized MITSUBISHI service center at your own expense.

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7. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

8. BEFORE REQUESTING SERVICE, please review the instruction booklet to insure proper installation and correct customer control adjustment. If the problem persists, contact your nearest MITSUBISHI Dealer for name(s) of authorized MITSUBISHI Service Center(s). If you are unable to obtain this information, please call 1-800-332-2119, or write us at the address below.

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P.O. Box 5025
Norcross, GA 30091-5025

MITSUBISHI

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SERIAL NO. _____

CUSTOMER NAME _____

STREET ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE ( ) _____ PURCHASE DATE ____/____/____
MO DAY YR

PLACE OF PURCHASE _____

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